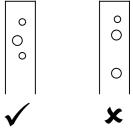


POST TOP DRILLING **ARRANGEMENT** 



$\checkmark$	X
TYPE 'A'	TYPE 'B

07	31/05/22	CHANGED	A.D
06	25/05/22	SURFACE MOUNTED POST BASE CHANGED	A.D
05	19/11/19	BEAM DETAILS ADDED	M.T
04	12/02/19	TITLEBLOCK REVISED	H.B
03	10/03/17	OFFSET POST REVISED	L.L
02	26/01/17	DETAILS ADDED & REVISED	L.L
1.2	20/05/15	DETAILS REVISED	M.T
REVn	DATE	DETAILS	INITIAL

# MegaRail ESP+W1 **N2 W1**

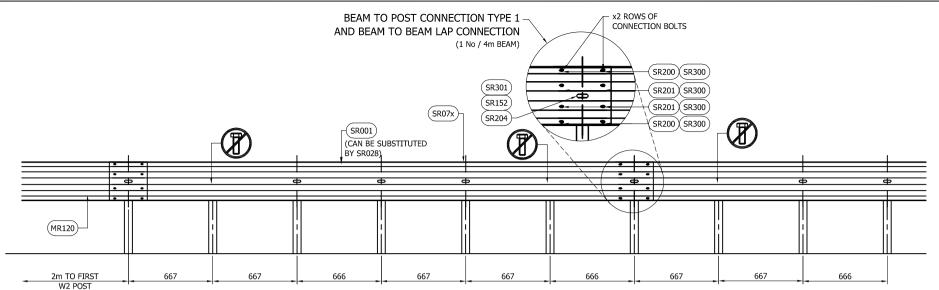
N2.W1 VEHICLE RESTRAINT SYSTEM COMPONENTS SCHEMATIC

# **SAFEROAD®**

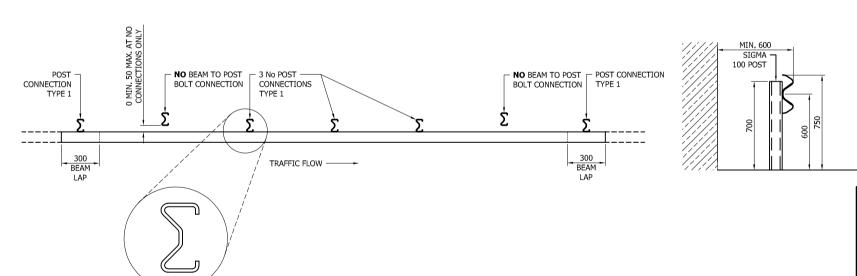
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

N2W1-GA-00



- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. AT LOCAL OBSTRUCTIONS INDIVIDUAL POSTS MAY BE OMITTED WHICH WOULD RESULT IN A GAP BETWEEN ADJACENT POSTS OF 1333. OR ALTERNATIVELY OFFSET POST SHOWN ON DRAWING N2W1-GA-00 CAN BE USED.
- 4. FOR OPTIONS ON POST FOUNDATIONS REFER TO DRAWING NUMBER MR-GA-020
- 5. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
- 6. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.
- 7. FRONT & BACKING BEAMS TO RUN IN SYNC.



#### TABLE 'A' - SYSTEM COMPONENT SCHEDULE - QUANTITIES / 4m BEAM SAFEROAD UK PART DESCRIPTION QUANTITY NUMBER BEAM (CAN BE SUBSTITUTED BY SR001 1 SR028) SR025 BEAM <sup>1</sup>/<sub>2</sub> ROUND ESP 1 SEE TABLE B POST SIGMA 100 FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING

NUMBER N2W1-GA-02

TABLE 'B' - SCHEDULE OF POST REFERENCE NUMBERS AND LENGTHS			
SAFEROAD UK PART NUMBER	POST LENGTH		
SR073	1100		
SR071	1900		
SR072	2100		
SR075	2400		

 $^{igspace}$  SIGMA 100 POST

04	19/11/19	BEAM DETAILS ADDED	м.т	
03	12/02/19	REVISED TITLEBLOCK	н.в	
02	26/01/17	KERB HEIGHT & CODES REV'D	L.L	D
1.2	20/05/15	DETAILS REVISED	M.T	
REVn	DATE	DETAILS	INITIAL	

## MegaRail ESP+W1 N2 W1

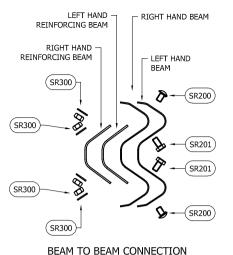
N2.W1VEHICLE RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

## **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

john.cudlipp@saferoad.co.uk

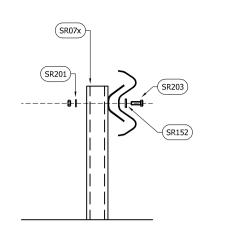
N2W1-GA-01

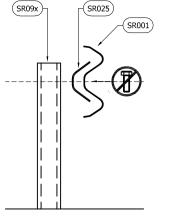


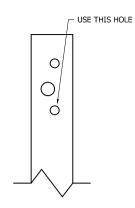
ARRANGEMENT AT FRONT

BEAM LAP

(x2 LOCATIONS / BEAM END)







BEAM TO POST CONNECTION HOLE

#### BEAM TO POST CONNECTION TYPE 1 (x4 LOCATIONS / BEAM)

NO BEAM TO POST BOLT CONNECTION (TYPE 2)

	BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM			
SAFEROAD UK PART NUMBER	DESCRIPTION	FRONT BEAM LAP JOINT	REINFORCING BEAM LAP JOINT	
SR200	SETSCREW 4.6 LAP M16 x 27 c/w NUT	8 (+4)	4 (+4)	
SR201	SETSCREW 8.8 M16 x 45 c/w NUT	2 (+2)	0	
SR300	M16 WASHER 18¢ HOLE	6 (+6)	4 (+4)	

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

ВО	BOLTING COMPONENT SCHEDULE - QUANTITIES / POST		
SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION	
SR203	SETSCREW 4.6 M10 x 60 c/w NUT	1	
SR152	WASHER PLATE 115 x 40 x 5 DIA. 12	1	
SR301	M10 WASHER 11¢ HOLE	1	
	QUANTITY OF CONNECTION TYPES / 4m BEAM		
		4 (+1)	

03	12/02/19	REVISED TITLEBLOCK	н.в
02	26/01/17	HOLE LOCATION & CODES REVISED	L.L
1.2	20/05/15	DETAILS REVISED	м.т
REVn	DATE	DETAILS	INITTIAL

## MegaRail ESP+W1 N2 W1

N2.W1 VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

## **SAFEROAD®**

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

DRAWING NUMBER:

GENERAL NOTES:

1. NUMBERS IN THE SCHEDULES SUFFIXED (+)

DENOTES THE ADDITIONAL QUANTITY OF

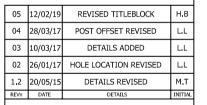
OF INDIVIDUAL RUNS OF BARRIER.

COMPONENTS REQUIRED FOR EXTREME ENDS

REVn:

N2W1-GA-02

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



## MegaRail ESP+W1 N2 W1

N2.W1 VEHICLE RESTRAINT SYSTEM. BEAM LAPPING ARRANGEMENT

## **SAFEROAD®**

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

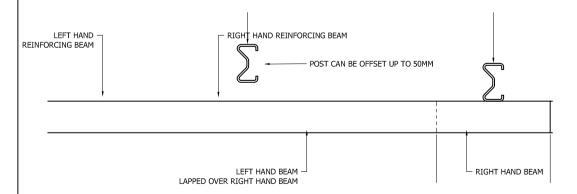
DRAWING NUMBER:

REVn:

N2W1-GA-03

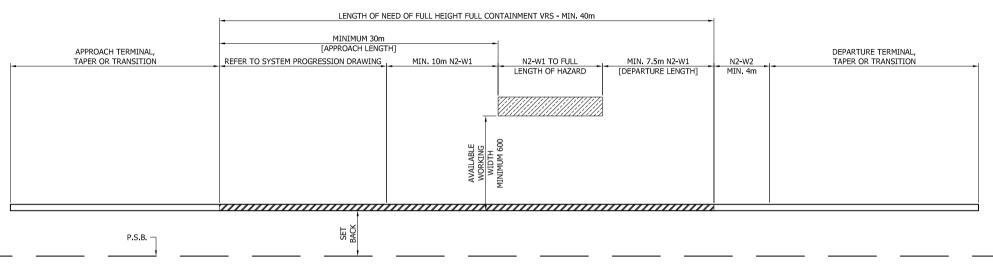
05

SIGMA 100 POST	
LEFT HAND REINFORCING BEAM	NOTE: BEAM ORIENTATION BEAM END WITH ADDITIONAL PERFORATIONS TO BE SITED AT THE APPROACH END
	<b>©</b>
REINFORCING BEAM 'LAG'	Ф
LEFT HAND BEAM —  NOTE: BEAM ORIENTATION TEARDROP HOLES TO BEAM DEPARTURE END	RIGHT HAND BEAM  NOTE: BEAM ORIENTATION CIRCULAR HOLES TO BEAM APPROACH END
TRAFFIC FLOW ————	



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

- 1. P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. MINIMUM LENGTH OF FULL HEIGHT VRS IS 40m



TRAFFIC FLOW

## MegaRail ESP+W1 N2 W1

VEHICLE RESTRAINT SYSTEM. SYSTEM PROGRESSION SCHEMATIC FOR W1 PROTECTION TO HAZARD

## **SAFEROAD**°

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

03 12/02/19

1.2 20/05/15

26/01/17

02

REVISED TITLEBLOCK

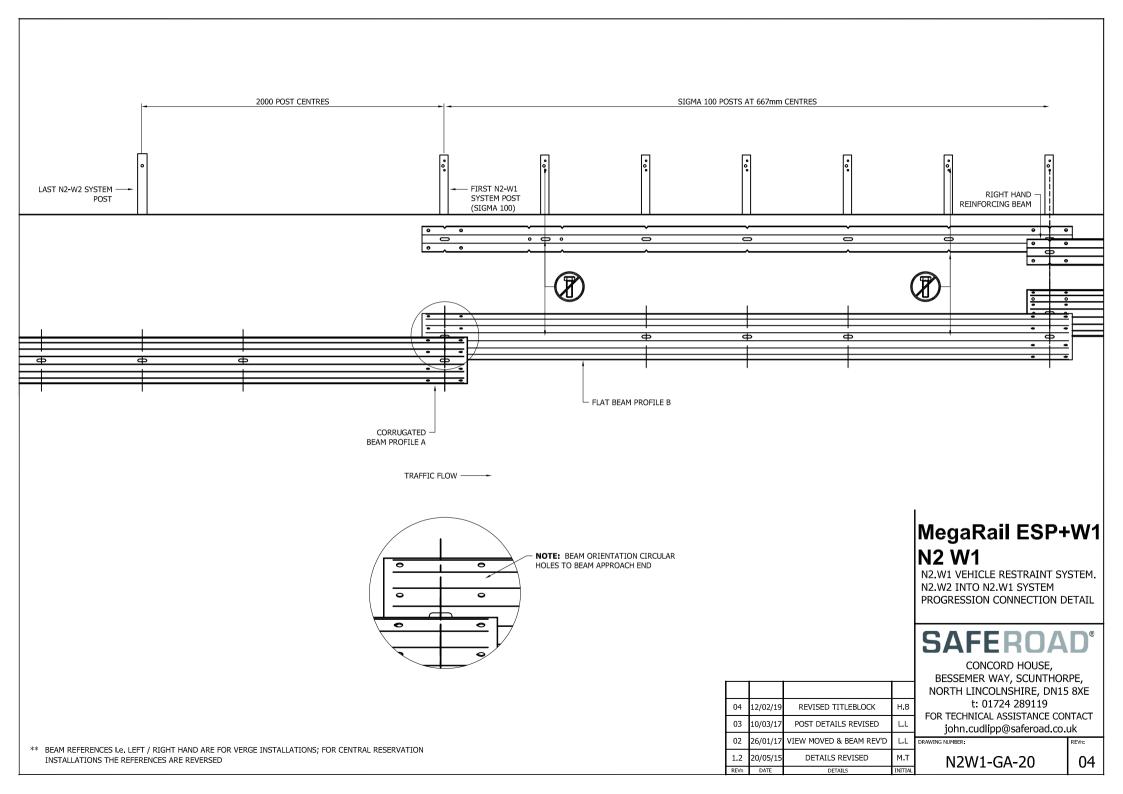
DETAILS REVISED

DETAILS REVISED

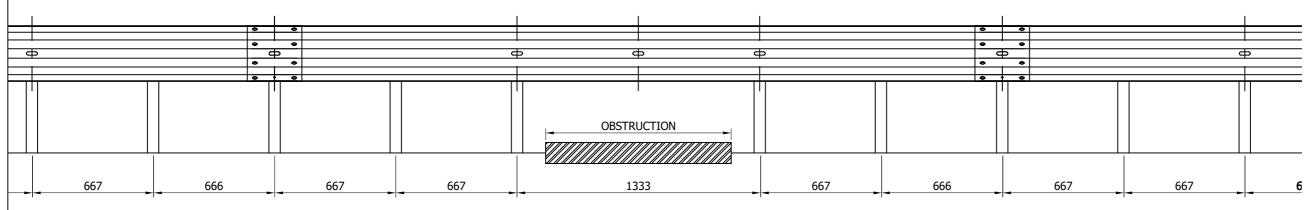
H.B

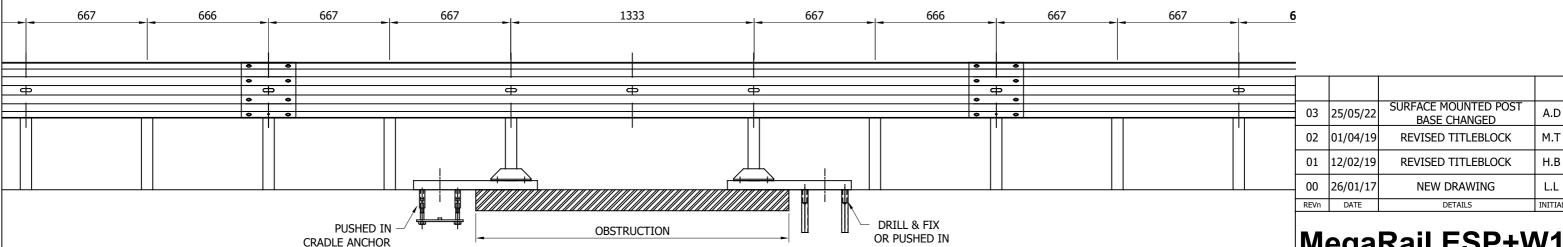
M.T

N2W1-GA-10



- 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. THE NEW POST SPACING MUST NOT EXCEED 1333mm. 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 N2W1-GA-00 CAN BE USED.





**ANCHOR** 

# MegaRail ESP+W1 N2 W1

N2.W1 VEHICLE RESTRAINT SYSTEM. DEVIATION SETTING OUT ARRANGEMENT

# **SAFEROAD®**

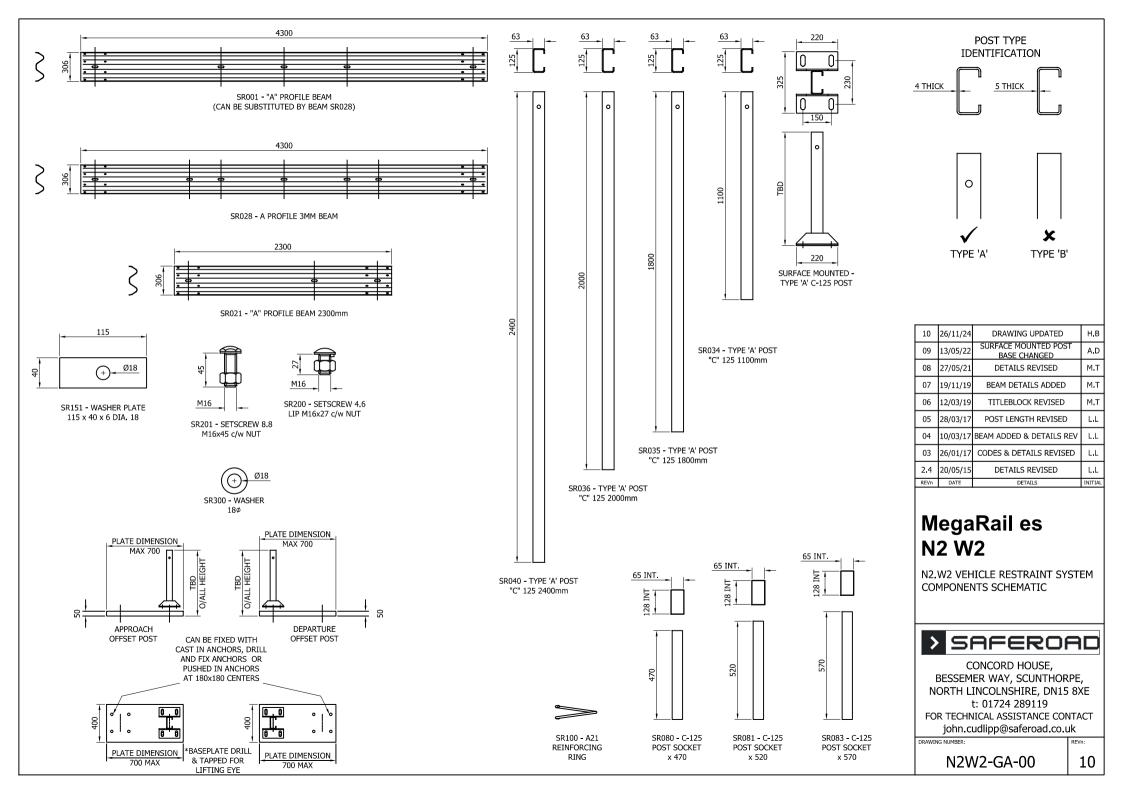
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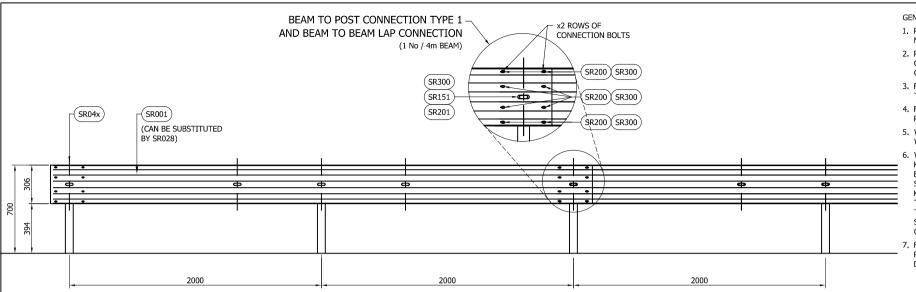
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

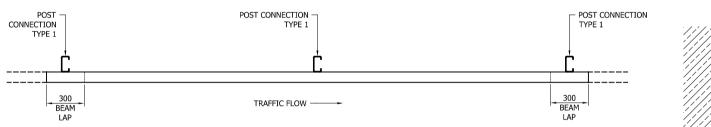
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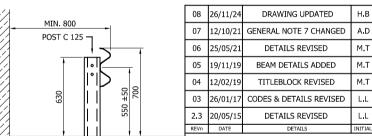
N2W1-GA-40





- 1. P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. FOR OPTIONS ON POST FOUNDATIONS REFER TO DRAWING NUMBER MR-GA-020
- 4. FOR DEVIATIONS IN SYSTEM POST PITCH REFER TO DRAWING N2W2-GA-40
- 5. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
- 6. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 100mm, SHOULD THE KERB BE HIGHER THAN 100mm AND THE FENCE IS SETBACK LESS THAN 250mm FROM FACE OF KERB THE SYSTEM HEIGHT IS MEASURED FROM THE CARRIAGEWAY, IF THE SETBACK IS MORE THAN 250mm FROM THE FACE OF KERB THE SYSTEM HEIGHT IS MEASURED FROM THE TOP OF THE KERB. SEE MR-GA-002.
- 7. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL SEE DRAWING MR-GA-042.





## MegaRail es **N2 W2**

N2.W2 VEHICLE RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT



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

DRAWING NUMBER:

N2W2-GA-01

80

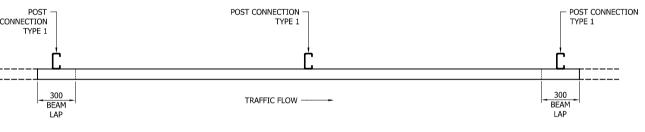
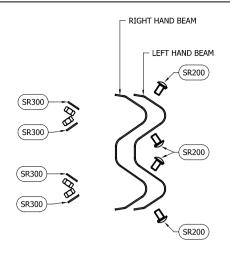


TABLE 'A' - SYS	ES / 4m BEAM	
SAFEROAD UK PART NUMBER	QUANTITY	
SR001	BEAM "A" PROFILE (CAN BE SUBSTITUTED BY SR028)	1
SEE TABLE 'B'	POST "C" 125	2
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAW		

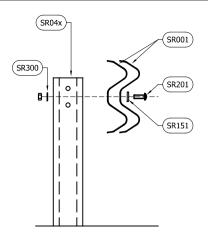
NUMBER N2W2-GA-02

TABLE 'B' - SCHEDULE OF POST REFERENCE NUMBERS AND LENGTHS		
SAFEROAD UK PART NUMBER	POST LENGTH	
SR034	1100	
SR035	1800	
SR036	2000	
SR040	2400	



#### BEAM TO BEAM CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM		
SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION
SR200	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)
SR300	WASHER M16 18¢ HOLE	8 (+8)



BEAM TO POST CONNECTION TYPE 1

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST		
SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION
SR201	SETSCREW 8.8 M16 x 45 c/w NUT	1
SR151	WASHER PLATE 115 x 40 x 6 DIA. 18	1
SR300	WASHER M16 18¢ HOLE	1

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

#### GENERAL NOTES:

NUMBERS IN THE SCHEDULES SUFFIXED (+)
DENOTES THE ADDITIONAL QUANTITY OF
COMPONENTS REQUIRED FOR EXTREME ENDS
OF INDIVIDUAL RUNS OF BARRIER.

05	26/11/24	DRAWING UPDATED	н.в
04	12/02/19	TITLEBLOCK REVISED	M.T
03	26/01/17	CODES & DETAILS REVISED	L.L
2.4	20/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

## MegaRail es N2 W2

N2.W2 VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

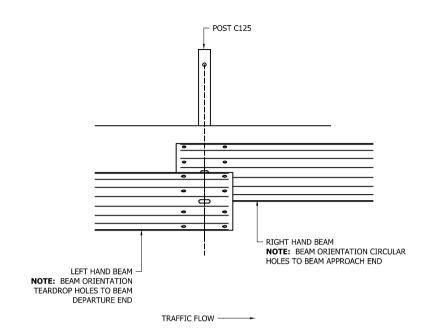


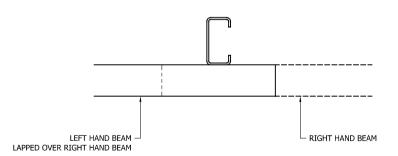
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

RAWING NUMBER:

REVn:

N2W2-GA-02





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

#### GENERAL NOTES:

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

05	26/11/24	DRAWING UPDATED	н.в
04	12/02/19	TITLEBLOCK REVISED	M.T
03	26/01/17	DETAILS REVISED	L.L
2.4	20/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

## MegaRail es N2 W2

N2.W2 VEHICLE RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR W2 MEGARAIL SYSTEM

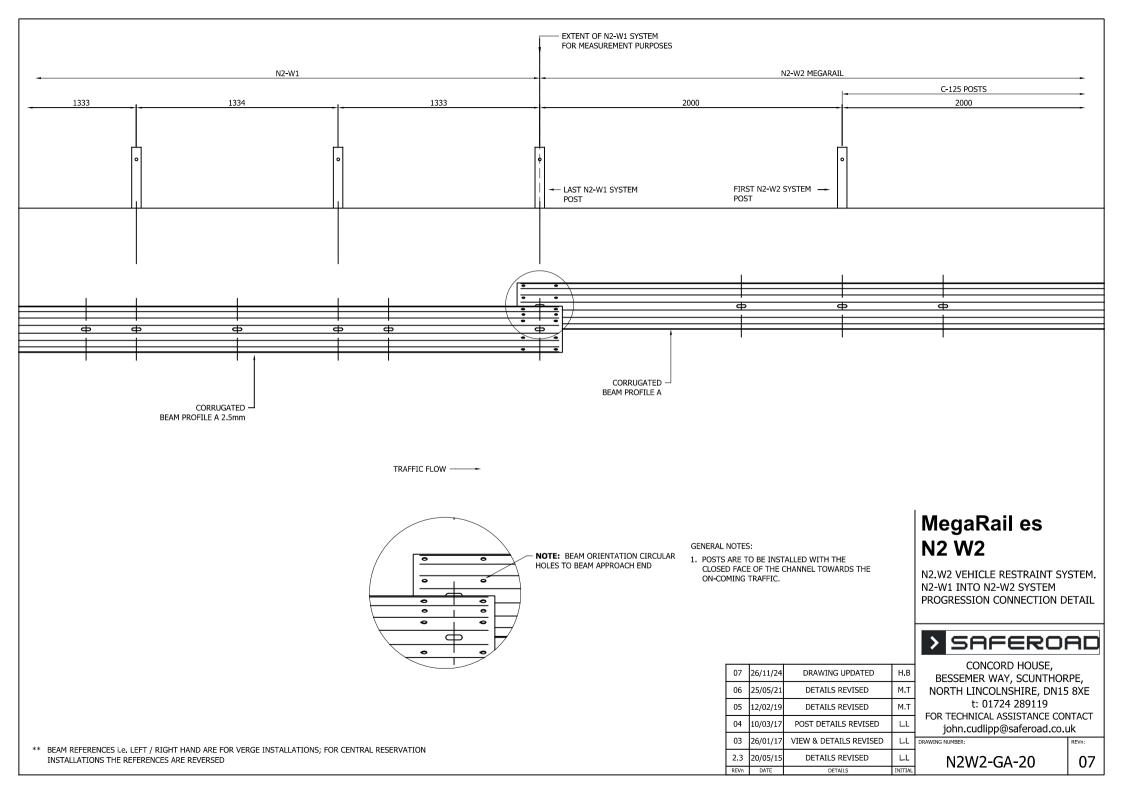


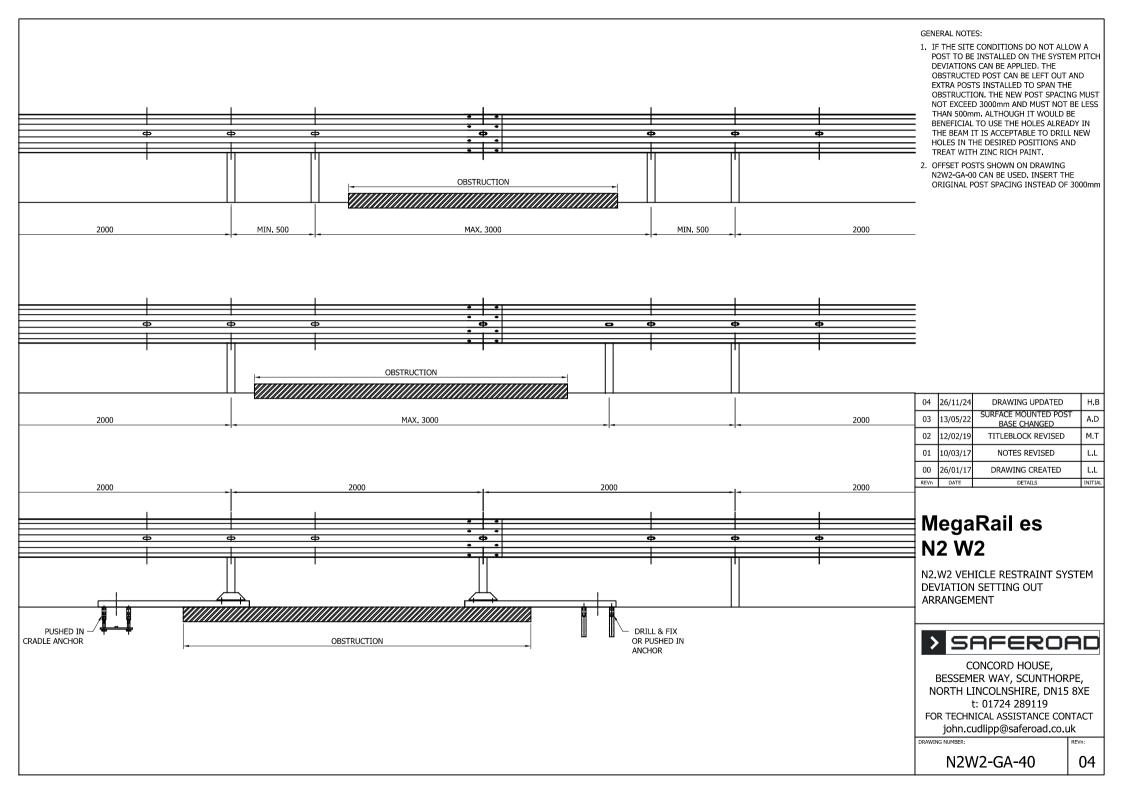
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

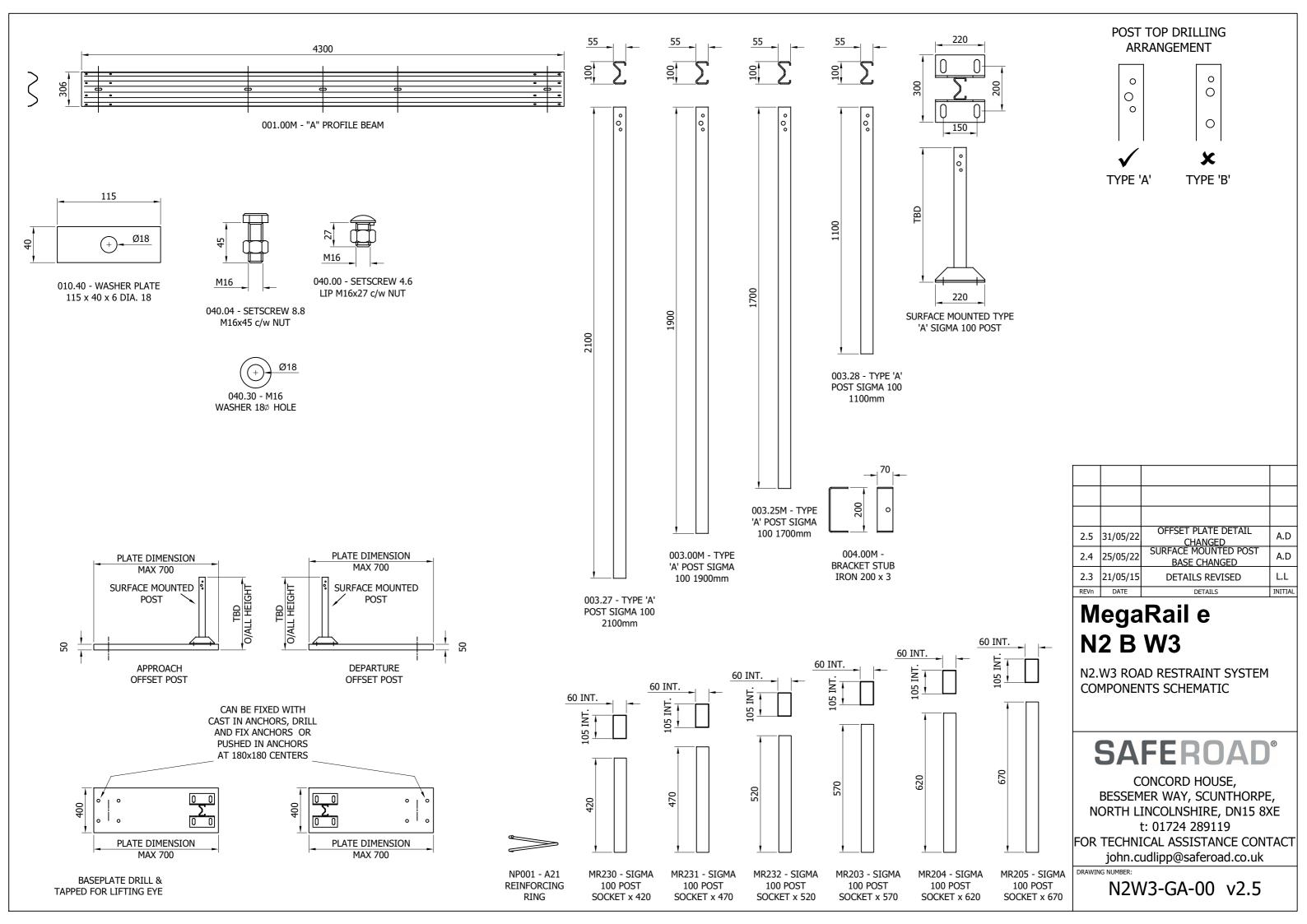
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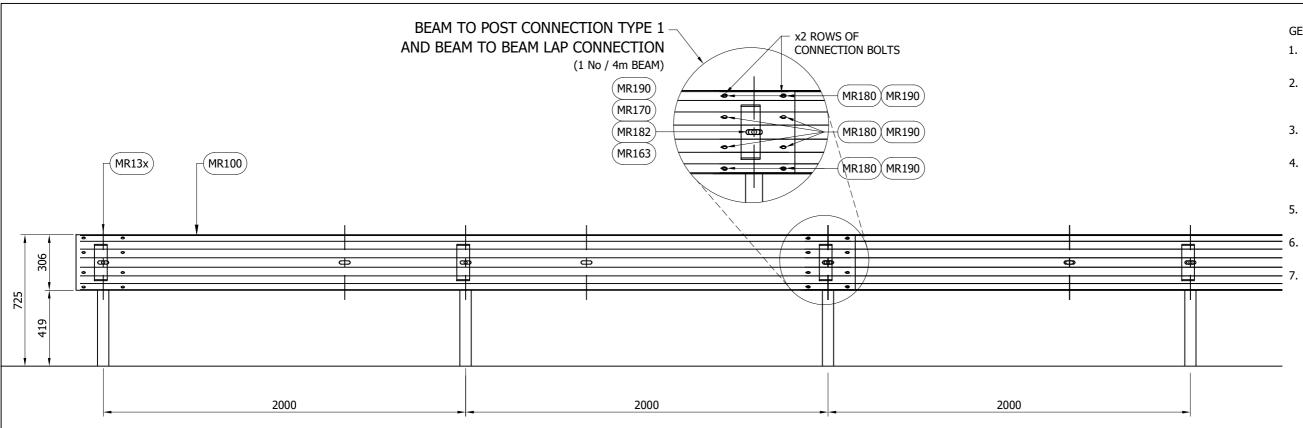
REVn:

N2W2-GA-03

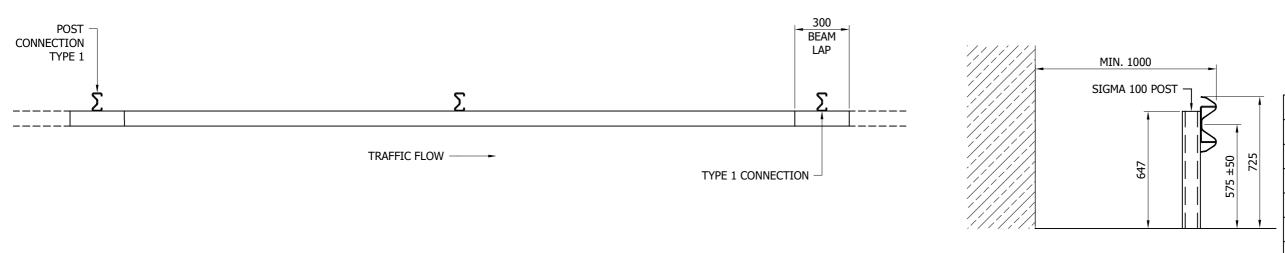








- 1. P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. FOR OPTIONS ON POST FOUNDATIONS REFER TO DRAWING NUMBER MR-GA-020
- FOR DEVIATIONS IN SYSTEM POST PITCH REFER TO SECTION 8 OF SAFEROAD MEGARAIL MANUAL, DEVIATION CHART
- WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
- 6. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 125mm.
- 7. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.



2.4	25/05/22	ADDRESS CHANGED	A.D		
2.3	21/05/15	DETIALS REVISED	L.L		
REVn	DATE	DETAILS	INITIAL		

# MegaRail e N2 B W3

N2.W3 ROAD RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

# **SAFEROAD®**

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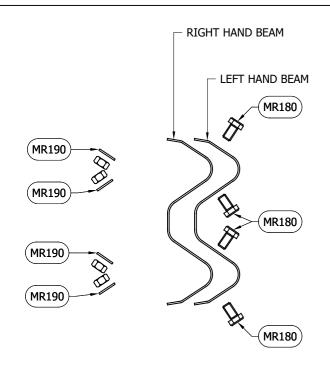
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

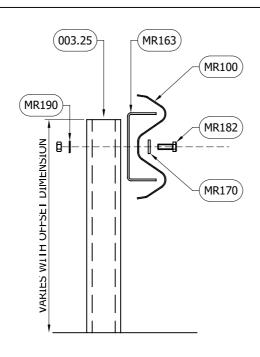
AWING NUMBER:

N2W3-GA-01 v2.4

SYSTEM COMPONENT SCHEDULE - QUANTITIES / 4m BEAM				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	QUANTITY	
001.00M	MR001	BEAM "A" PROFILE	1	
004.00M	MR035	BRACKET STUB IRON 200 x 3	2	
003.xx		POST SIGMA 100	2	
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER N2W3-GA-02				

TABLE 'B' - SCHEDULE OF POST REFERENCE NUMBERS AND LENGTHS				
OUTIMEX MANUFACTURING REF.	SAFEROAD UK PART NUMBER	POST LENGTH		
003.28	MR031	1100		
003.25M	MR032	1700		
003.00M	MR033	1900		
003.27	MR034	2100		





BEAM TO BEAM LAP CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BEAM TO POST CONNECTION TYPE 1

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION	
040.00	MR180	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)	
040.30	MR220	WASHER M16 18Ø HOLE	8 (+8)	

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST					
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION		
040.04	MR182	SETSCREW 8.8 M16x45 c/w NUT	1		
010.40	MR160	WASHER PLATE 115 x 40 x 6 DIA. 18	1		
040.30	MR220	WASHER M16 18¢ HOLE	1		
QUANTITY OF CONNECTION TYPES / 4m BEAM					
			2 (+1)		

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

1. NUMBERS IN THE SCHEDULES SUFFIXED (+)
DENOTES THE ADDITIONAL QUANTITY OF
COMPONENTS REQUIRED FOR EXTREME ENDS
OF INDIVIDUAL RUNS OF BARRIER.

2.4	25/05/22	ADDRESS CHANGED	A.D
2.3	21/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

# MegaRail e N2 B W3

N2.W3 ROAD RESTRAINT SYSTEM BOLTING ARRANGEMENTS

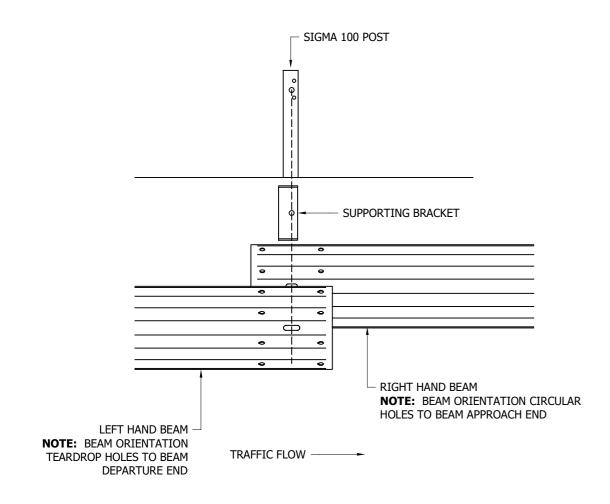
# **SAFEROAD®**

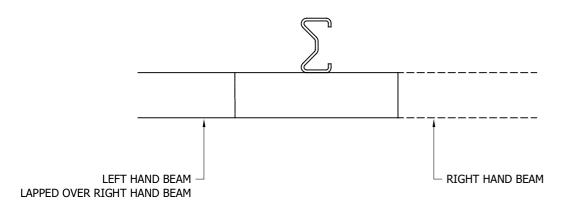
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

RAWING NUMBER

N2W3-GA-02 v2.4





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

#### **GENERAL NOTES:**

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

2.4	25/05/22	ADDRESS CHANGED	A.D
2.3	21/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

# MegaRail e N2 B W3

N2.W3 ROAD RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR W3 MEGARAIL SYSTEM

# **SAFEROAD®**

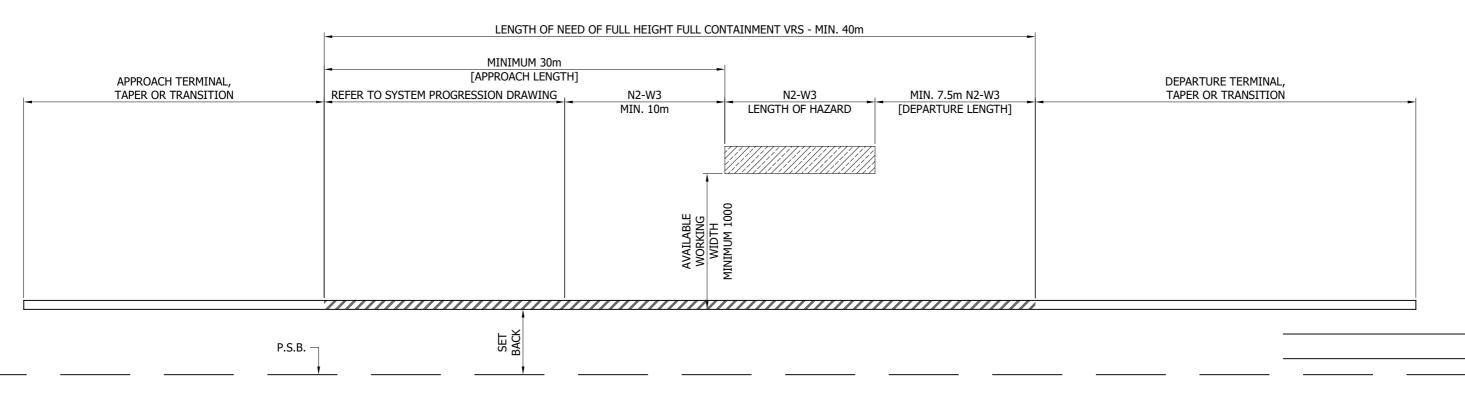
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

AWING NUMBER:

N2W3-GA-03 v2.4

- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. MINIMUM LENGTH OF FULL HEIGHT VRS IS 40m



TRAFFIC FLOW —

2.4	25/05/22	ADDRESS CHANGED	A.D
2.3	21/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

# MegaRail e N2 B W3

ROAD RESTRAINT SYSTEM. SYSTEM PROGRESSION SCHEMATIC FOR N2.W3 PROTECTION TO HAZARD

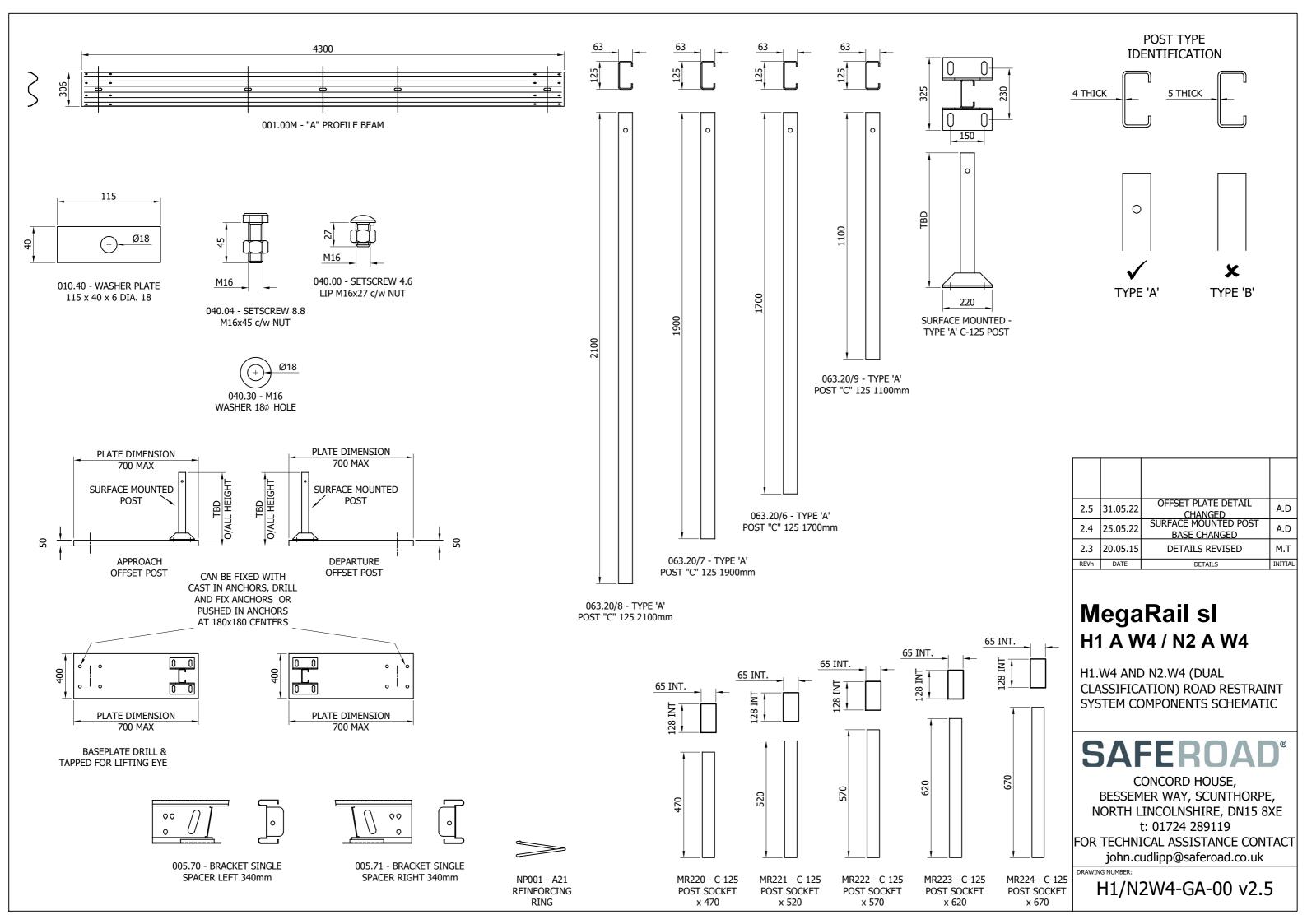
# **SAFEROAD®**

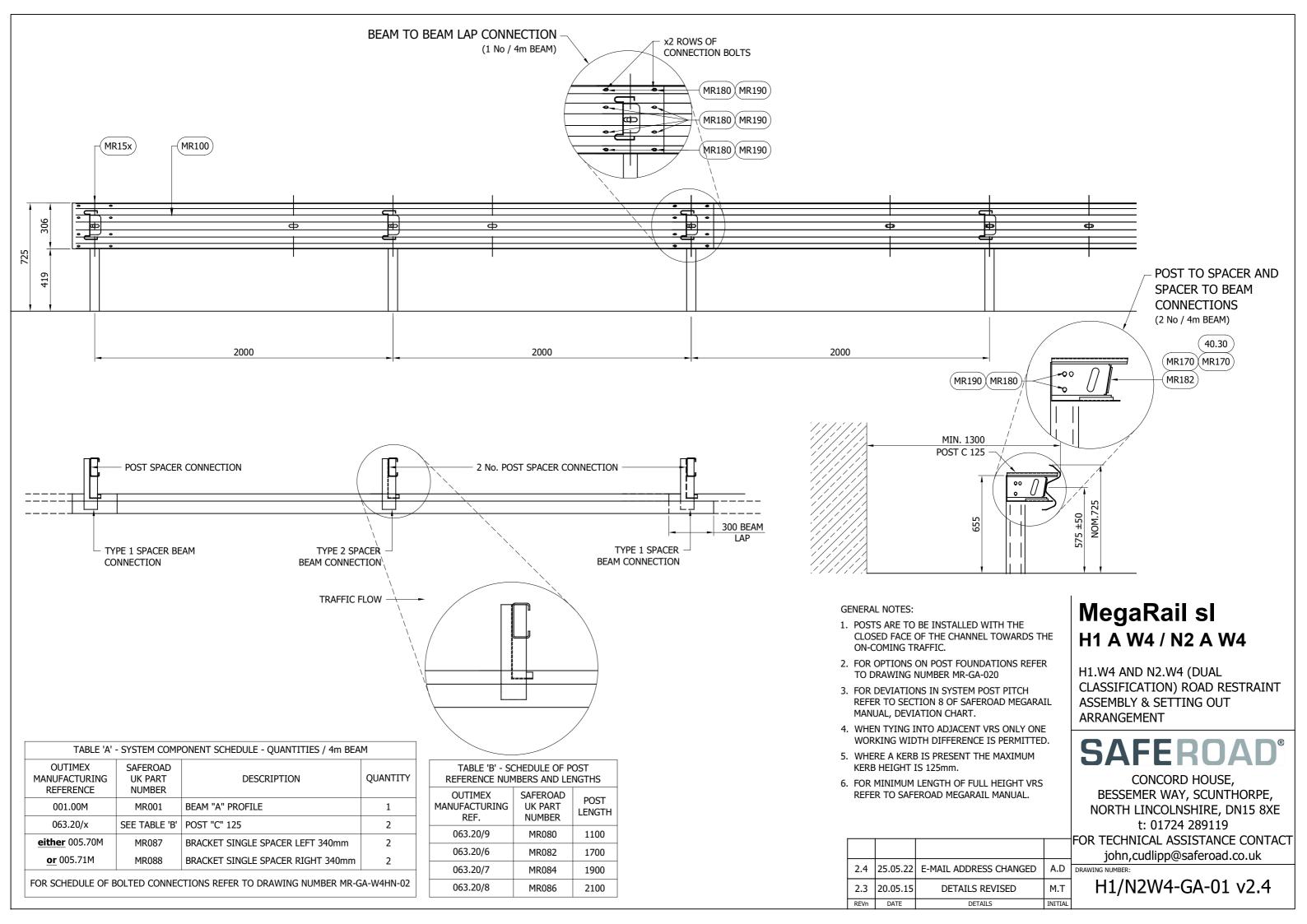
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

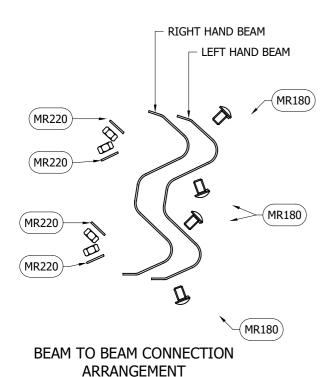
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

AWING NUMBER:

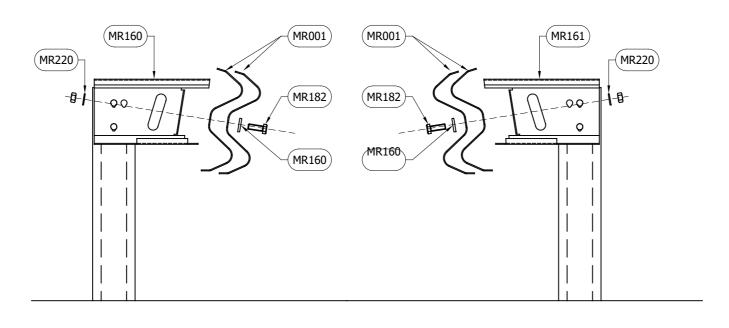
N2W3-GA-10 v2.4







(x2 LOCATIONS / BEAM END)

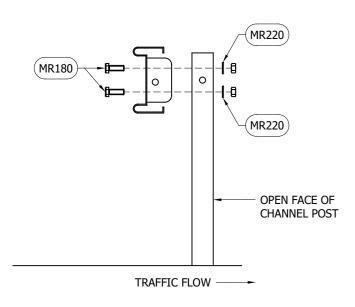


SPACER TO BEAM CONNECTION TYPE 1 [VERGE] SPACER TO BEAM CONNECTION TYPE 1 [CENTRAL RESERVE]

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION	
040.00	MR180	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)	
040.30	MR220	WASHER M16 18⊅ HOLE	8 (+8)	

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

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION	
040.00	MR180	SETSCREW 4.6 LIP M16 x 27 c/w NUT	2	
040.04	MR182	SETSCREW 8.8 M16x45 c/w NUT	1	
010.40	MR160	WASHER PLATE 115 x 40 x 6 DIA. 18	2	
040.30	MR220	WASHER M16 18¢ HOLE	3	
QUANTITY OF CONNECTION TYPES / 4m BEAM				
			2 (+1)	



SPACER BEAM TO POST CONNECTION TYPE 1

# 2.4 25.05.22 E-MAIL ADDRESS CHANGED A.D 2.3 20.05.15 DETAILS REVISED M.T REVN DATE DETAILS INITIAL

## MegaRail sl H1 A W4 / N2 A W4

H1.W4 AND N2.W4 (DUAL CLASSIFICATION) ROAD RESTRAINT SYSTEM BOLTING ARRANGEMENTS

# **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

RAWING NUMBER:

**GENERAL NOTES:** 

1. NUMBERS IN THE SCHEDULES SUFFIXED (+)

OF INDIVIDUAL RUNS OF BARRIER.

2. VERGE AND CENTRAL RESERVE BRACKET

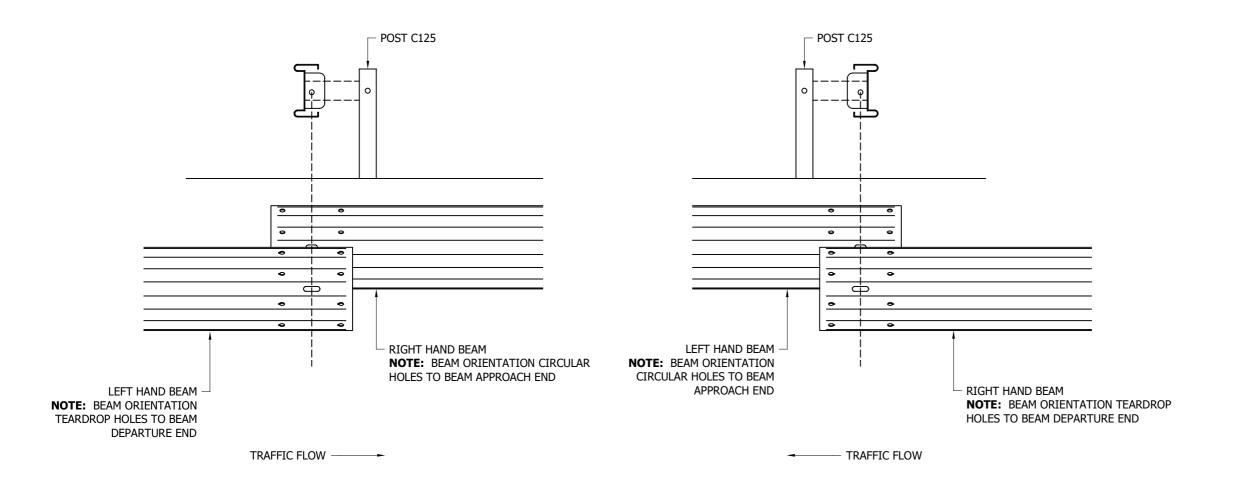
SPACERS ARE HANDED AND NOT

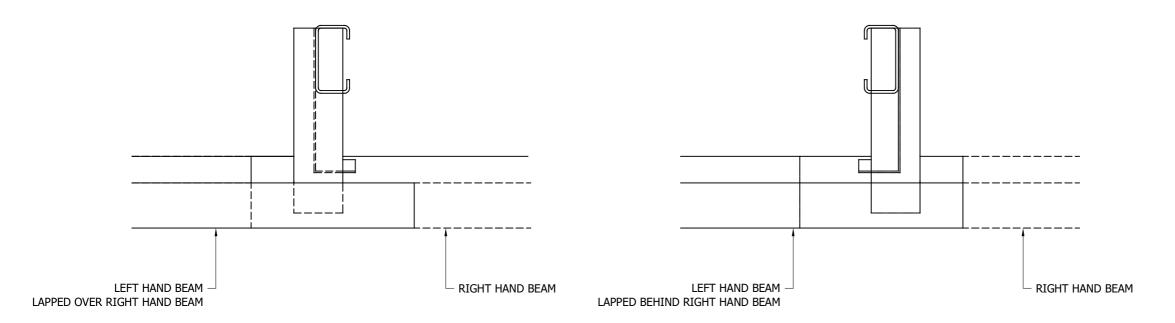
INTERCHANGEABLE.

DENOTES THE ADDITIONAL QUANTITY OF

COMPONENTS REQUIRED FOR EXTREME ENDS

H1/N2W4-GA-02 v2.4





SPACER TO BEAM CONNECTION [VERGE]

SPACER TO BEAM CONNECTION [CENTRAL RESERVE]

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

2.5	25.05.22	E-MAIL ADDRESS CHANGED	A.D
2.4	20.05.15	DETAILS REVISED	М.Т
REVn	DATE	DETAILS	INITIAL

## MegaRail sl H1 A W4 / N2 A W4

H1.W4 AND N2.W4 (DUAL CLASSIFICATION) ROAD RESTRAINT BEAM LAPPING DETAIL FOR W4 MEGARAIL SYSTEM

# **SAFEROAD®**

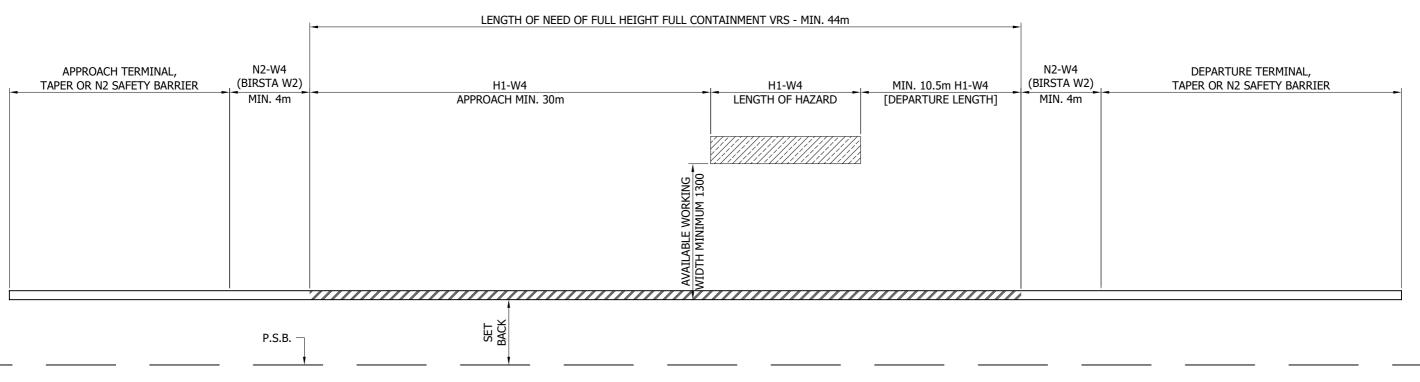
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

ZAWING NUMBER

H1/N2W4-GA-03 v2.5

- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. MINIMUM LENGTH OF FULL HEIGHT VRS IS 44m



TRAFFIC FLOW —

2.5 25.05.22 E-MAIL ADDRESS CHANGED A.D

## MegaRail sl H1 A W4 / N2 A W4

H1.W4 AND N2.W4 (DUAL CLASSIFICATION) ROAD RESTRAINT SYSTEM COMPONENTS SCHEMATIC

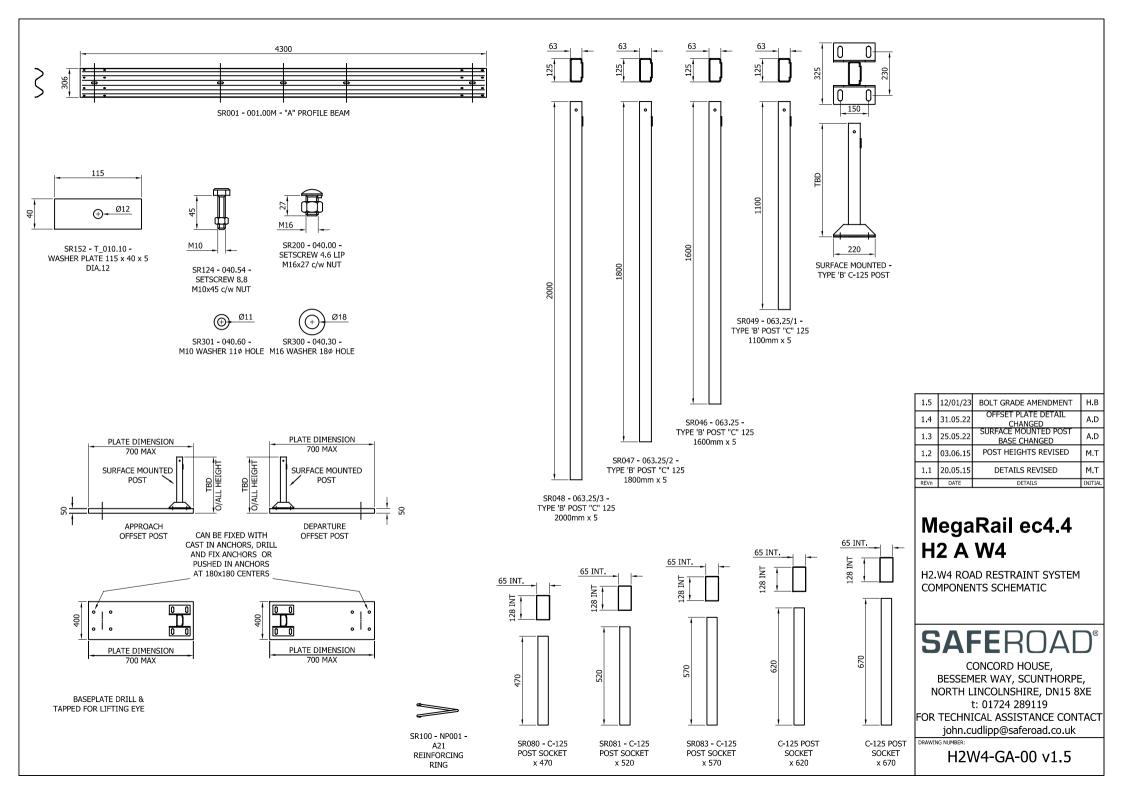
# **SAFEROAD®**

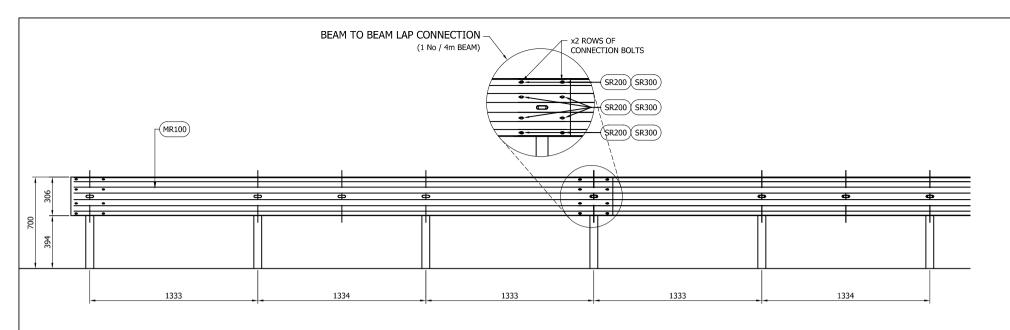
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

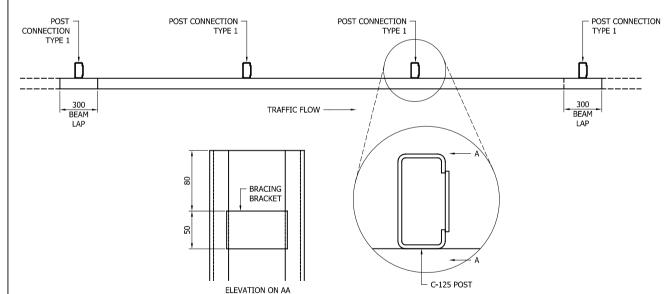
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

AWING NUMBER:

H1/N2W4-GA-10 v2.5







MIN. 1000
POST C 125
610 550 ±50 700
9   1   2820
+       + +

#### 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 NUMBER MR-GA-020
- 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 ARAIL MANUAL.

1.5	12/01/23	BOLT CODE AMENDMENT	H.B
1.4	25.05.22	E-MAIL ADDRESS CHANGED	A.D
1.3	02.11.15	BARRIER HEIGHT REVISED	L.L
1.2	03.06.15	BARRIER HEIGHT REVISED	M.T
1.1	20.05.15	DETAILS REVISED	м.т
REVn	DATE	DETAILS	INITIAL

## MegaRail ec4.4 **H2 A W4**

H1.W3 ROAD RESTRAINT SYSTEM ASSEMBLY & SETTING OUT ARRANGEMENT

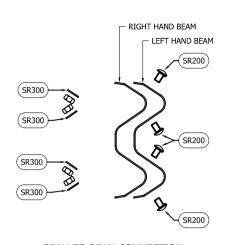
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

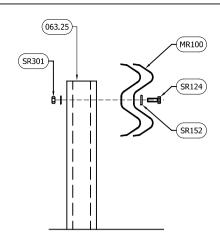
john.cudlipp@saferoad.co.uk

H2W4-GA-01 v1.5

TABLE 'A' - SYSTEM COMPONENT SCHEDULE - QUANTITIES / 4m BEAM								
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	QUANTITY					
001.00M MR001 BEAM "A" PROFILE 1								
063.25/x	SEE TABLE 'B'	POST "C" 125 c/w BRACKET	3					
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER H1W3-GA-02								

TABLE 'B' - SCHEDULE OF POST REFERENCE NUMBERS AND LENGTHS		
OUTIMEX MANUFACTURING REF.	SAFEROAD UK PART NUMBER	POST LENGTH
063.25/1	MR120	1100
063.25	MR121	1600
063.25/2	MR122	1800
063.25/3	MR123	2000





3 (+1)

#### BEAM TO BEAM CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BEAM TO POST CONNECTION TYPE 1

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM				BOLTING COMPONENT SCHEDULE - QUANTITIES / POST				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION	OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION	
040.00	SR200	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)	040.54	SR124	SETSCREW 8.8 M10 x 45 c/w NUT		
040.30	WASHER M16 18¢ HOLE	8 (+8)	T_010.10	SR152	WASHER PLATE 115 x 40 x 5 DIA. 12	1		
			40.60	SR301	M10 WASHER 11¢ HOLE	1		
	* BEAM REFERENCES i.e. LEFT / RIGHT HAND ARE FOR VERGE INSTALLATIONS; FOR CENTRAL RESERVATION INSTALLATIONS THE REFERENCES ARE REVERSED				QUANT	TTY OF CONNECTION TYPES / 4m BEAM		
OLITIO IL ITEOLIT	.,	LES (110110 THE THE ENERGES THE TREATE	.025				2 ( . 4 )	

#### GENERAL NOTES:

- NUMBERS IN THE SCHEDULES SUFFIXED (+)
  DENOTES THE ADDITIONAL QUANTITY OF
  COMPONENTS REQUIRED FOR EXTREME ENDS
  OF INDIVIDUAL RUNS OF BARRIER.
- 2. POST STRAPS ARE INTERCHANGEABLE BETWEEN VERGE & CENTRAL RESERVE.

1.3	12/01/23	BOLT GRADE AMENDMENT	H.B
1.2	25.05.22	E-MAIL ADDRESS CHANGED	A.D
1.1	20.05.15	NOTES REVISED	м.т
REVn	DATE	DETAILS	INITIAL

## MegaRail ec4.4 H2 A W4

H1.W3 ROAD RESTRAINT SYSTEM BOLTING ARRANGEMENTS

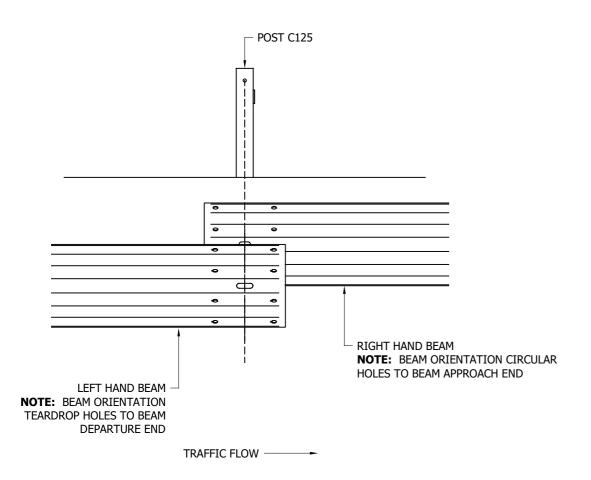
## SAFEROAD

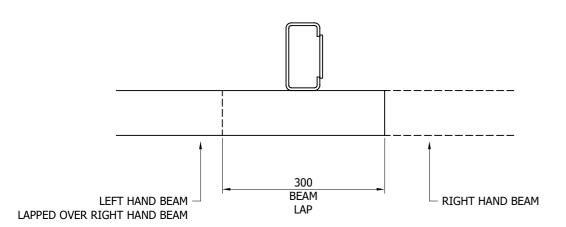
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

WING NUMBER:

H2W4-GA-02 v1.3





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

1.2 25.05.22 E-MAIL ADDRESS CHANGED A.D				
	1.2	25.05.22	E-MAIL ADDRESS CHANGED	A.D
1.1 20.05.15 REVn BOX ADDED M.T	1.1	20.05.15	REVn BOX ADDED	M.T
REVN DATE DETAILS INITIA	REVn	DATE	DETAILS	INITIAL

# MegaRail ec4.4 H2 A W4

H1.W3 ROAD RESTRAINT SYSTEM BEAM LAPPING DETAIL FOR H1 A W3 MEGARAIL SYSTEM

# **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

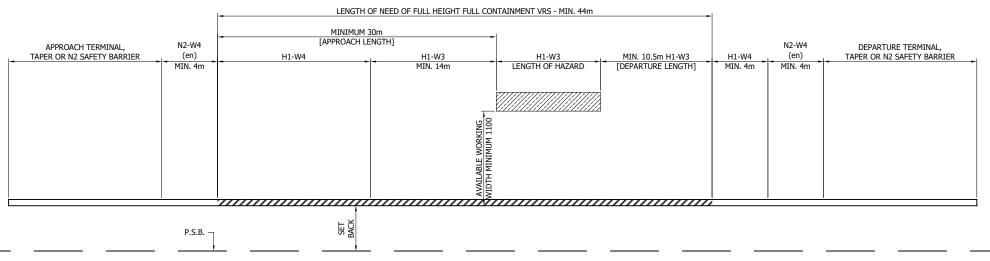
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

H2W4-GA-03 v1.2

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

- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. MINIMUM LENGTH OF FULL HEIGHT VRS IS 44m



## MegaRail ec4.4

**H2 A W4** 

H1.W3 ROAD RESTRAINT SYSTEM SYSTEM PROGRESSION SCHEMATIC FOR H1 W3 PROTECTION TO HAZARD

## **SAFEROAD®**

CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT

john.cudlipp@saferoad.co.uk

A.D DRAWING NUMBER:

M.T INITIAL

25.05.22

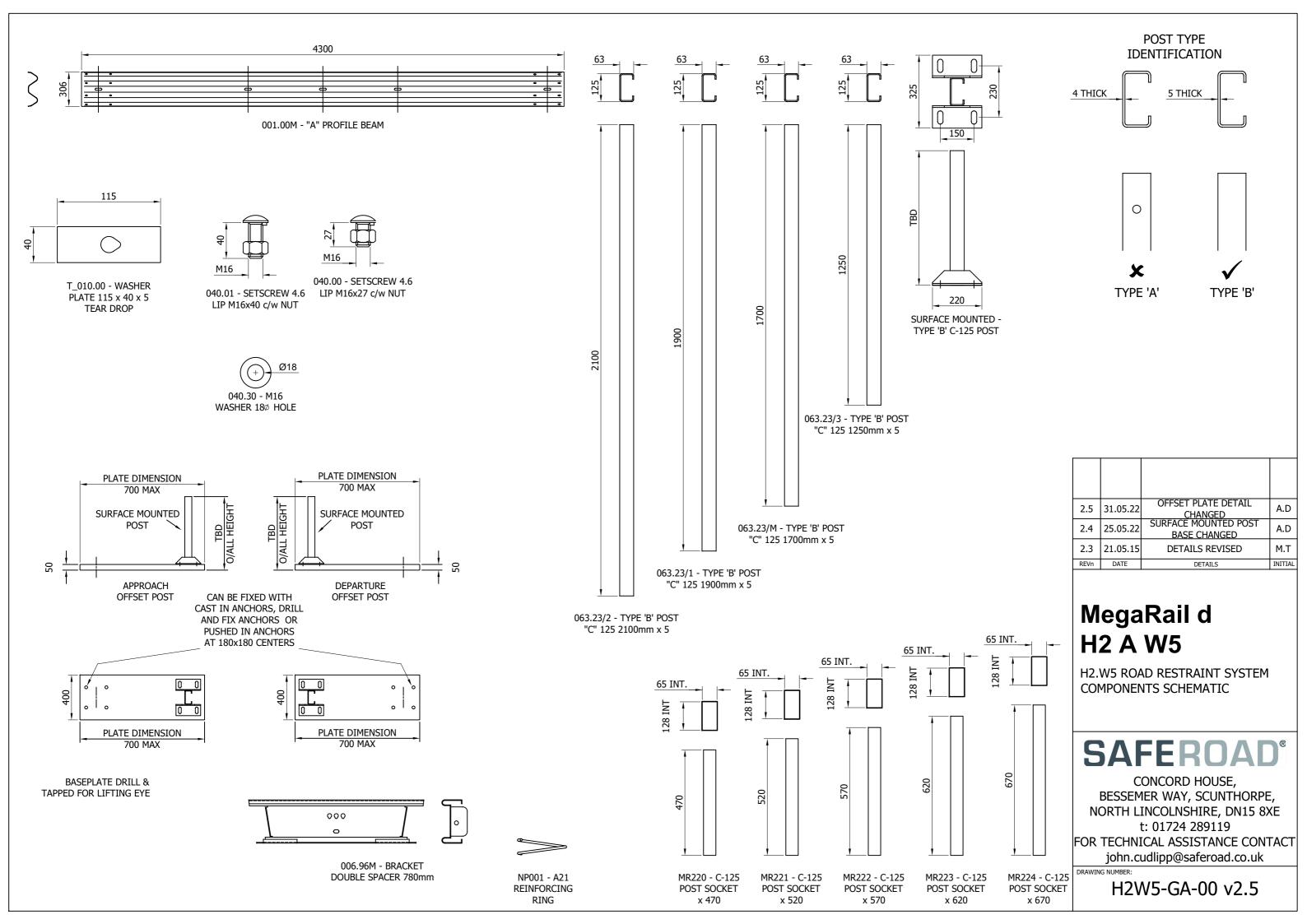
1.1 20.05.15

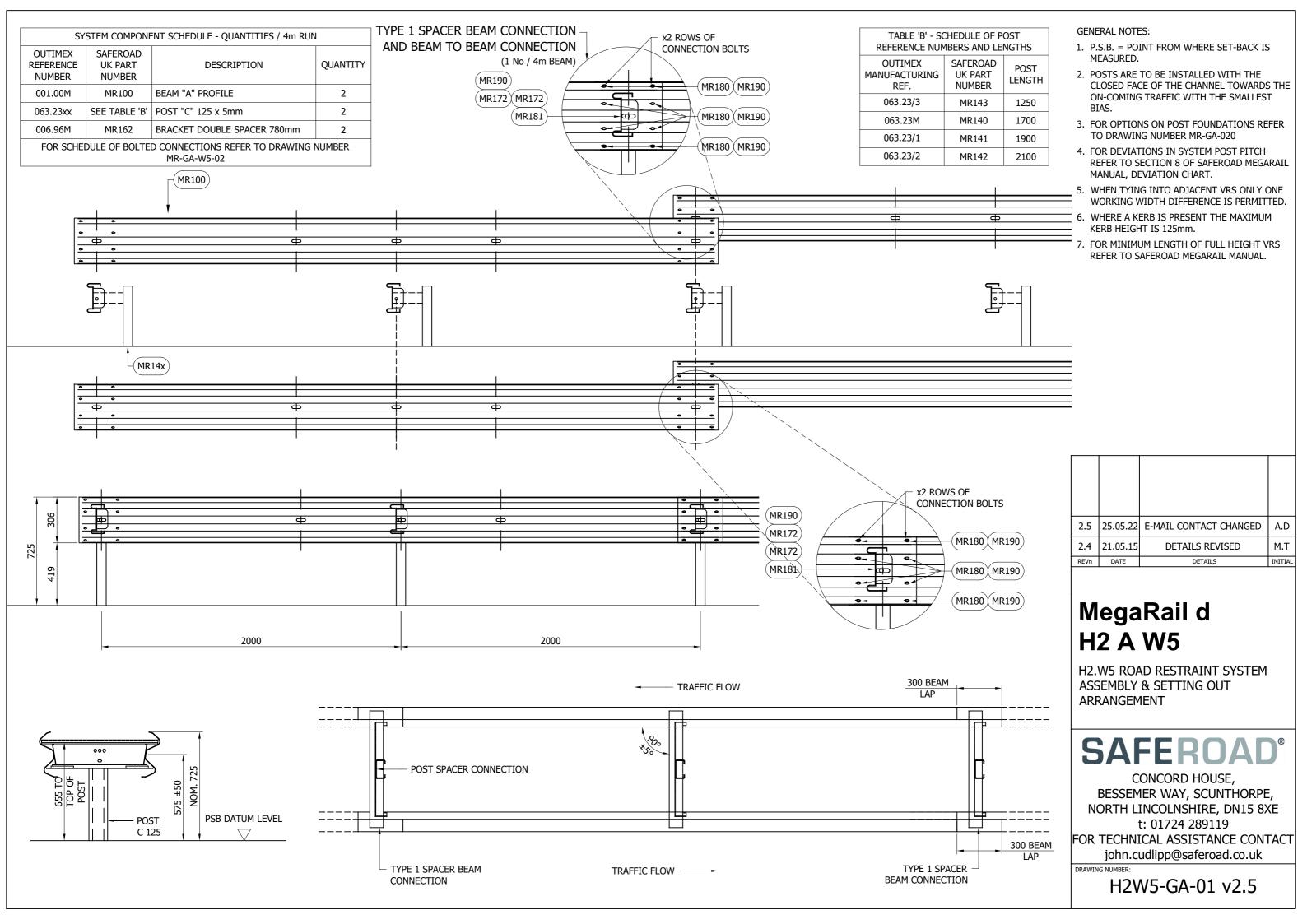
E-MAIL ADDRESS CHANGED

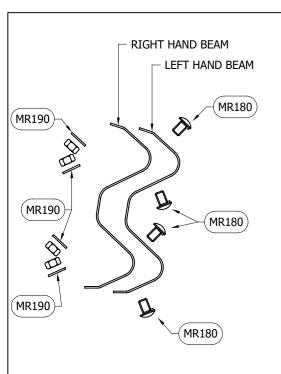
DETAILS REVISED

H2W4-GA-10 v1.2

TRAFFIC FLOW —







#### BEAM TO BEAM CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

NUMBER

MR180

MR190

REFERENCE

040.00

040.30

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM

OUTIMEX SAFEROAD BEAM TO
MANUFACTURING UK PART DESCRIPTION BEAM

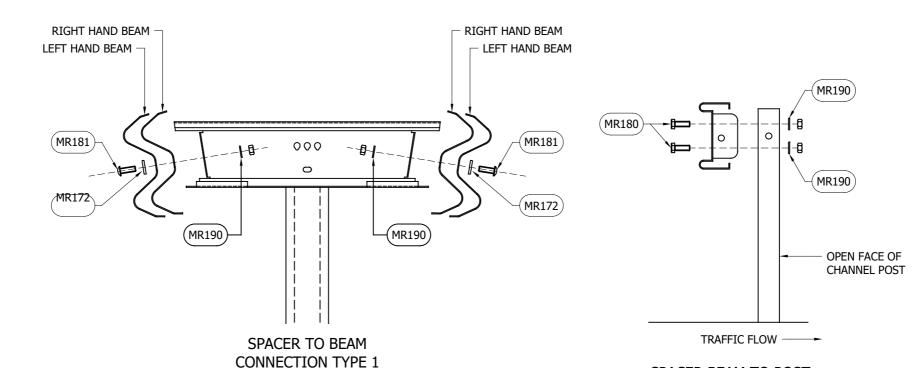
WASHER M16 18Ø HOLE

SETSCREW 4.6 LIP M16x27 c/w NUT

CONNECTION

8 (+8)

8 (+8)



SPACER BEAM TO POST

**CONNECTION TYPE 1** 

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST									
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION						
040.00	040.00 MR180 SETSCREW 4.6 LIP M16 x 27 c/w NUT								
040.01	2								
010.00	2								
040.30	4								
QUANTITY OF CONNECTION TYPES / 4m BEAM									
	2 (+1)								

#### GENERAL NOTES:

1. NUMBERS IN THE SCHEDULES SUFFIXED (+)
DENOTES THE ADDITIONAL QUANTITY OF
COMPONENTS REQUIRED FOR EXTREME ENDS
OF INDIVIDUAL RUNS OF BARRIER.

2.6	25.05.22	E-MAIL ADDRESS CHANGED	A.D
2.5	21.05.15	DETAILS REVISED	м.т
REVn	DATE	DETAILS	INITIAL

# MegaRail d H2 A W5

H2.W5 ROAD RESTRAINT SYSTEM BOLTING ARRANGEMENTS

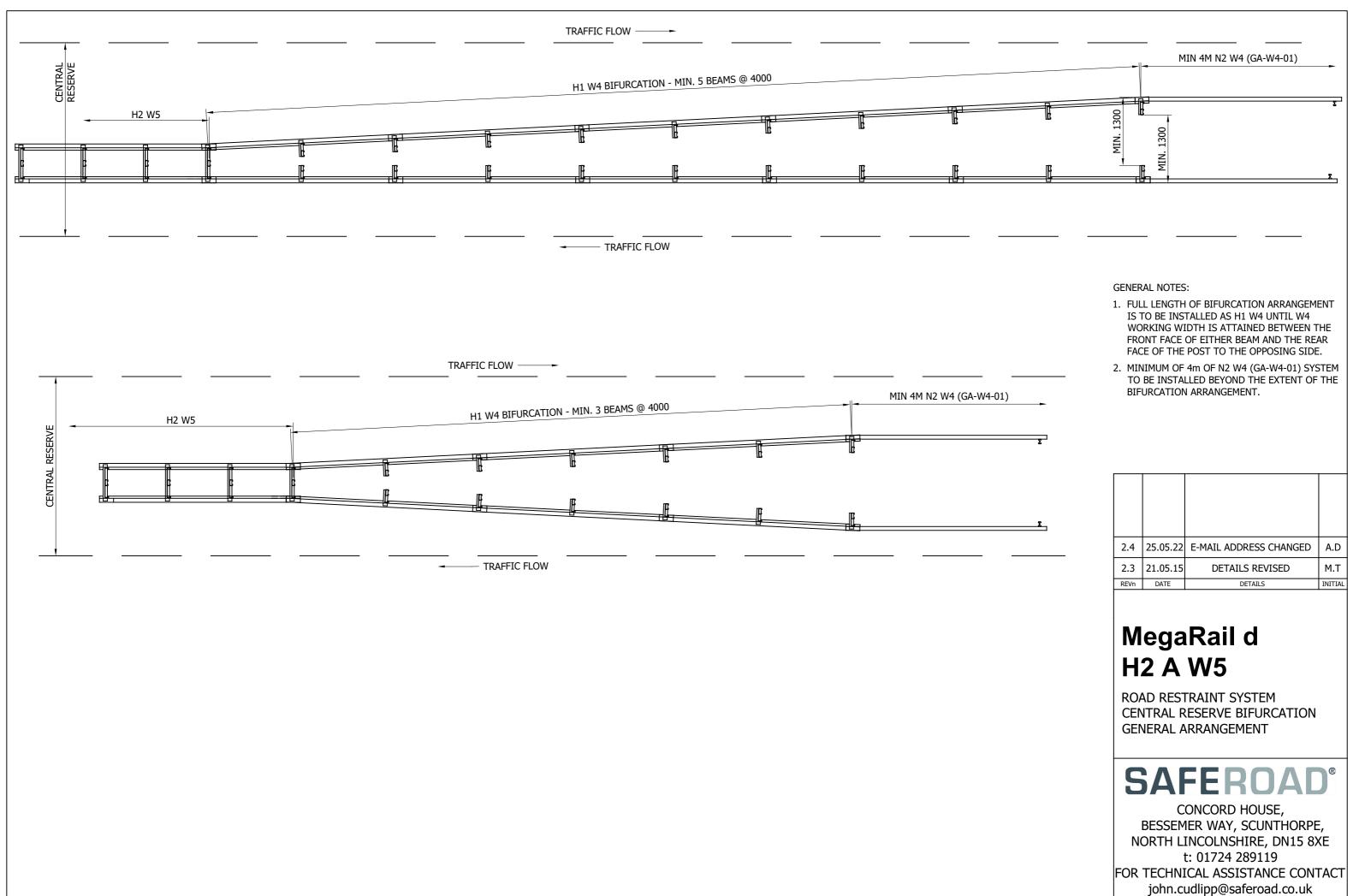
# **SAFEROAD®**

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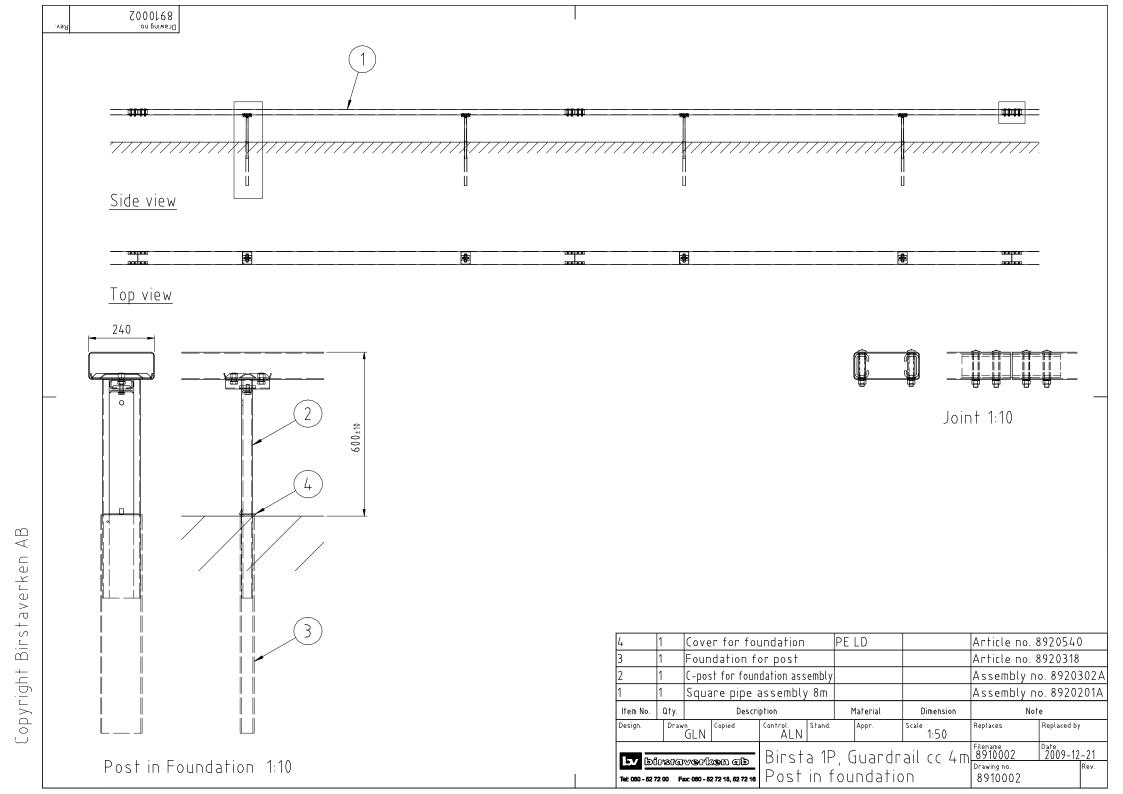
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

AWING NUMBER:

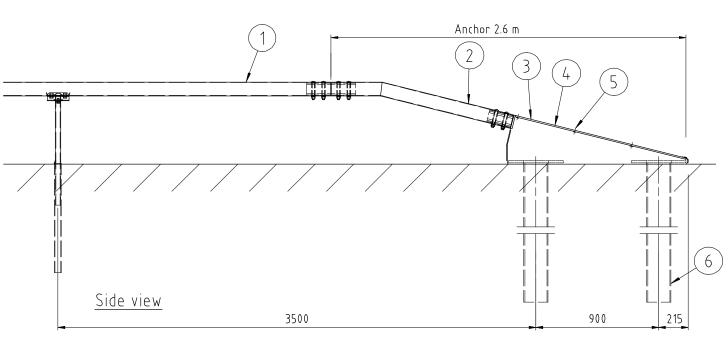
H2W5-GA-02 v2.6



H2W5-GA-50 v2.4



Or 0100108



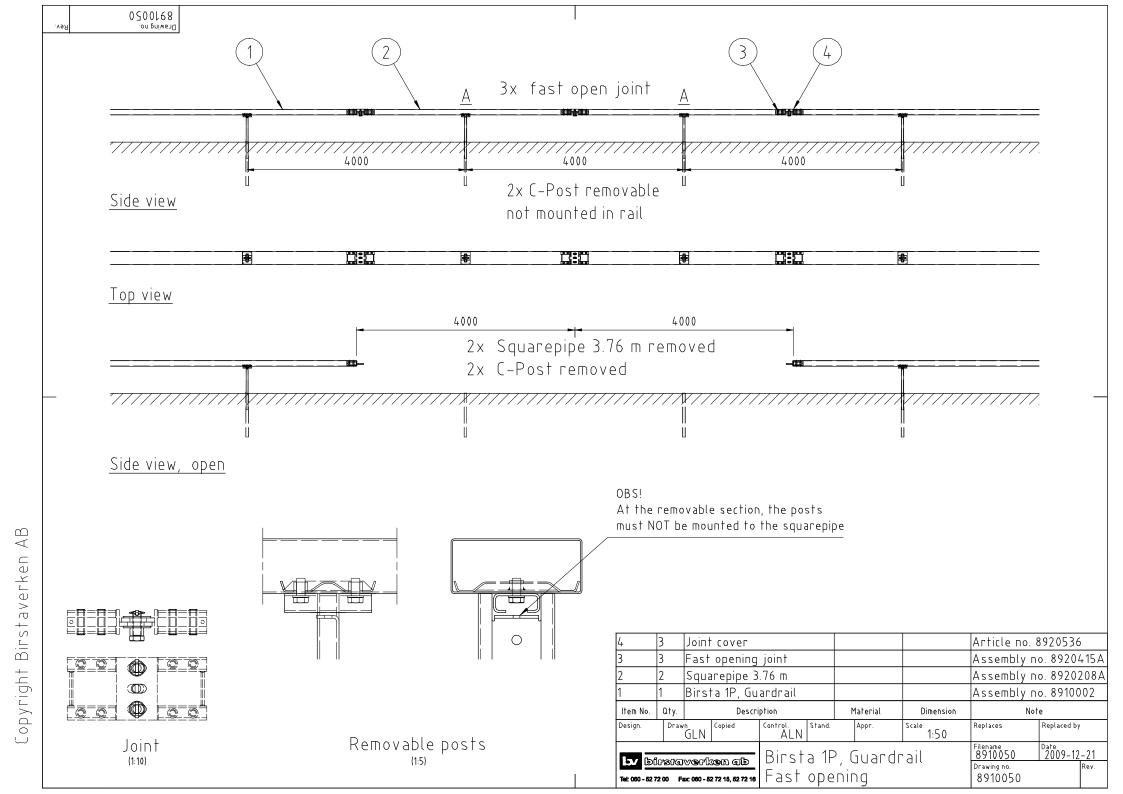


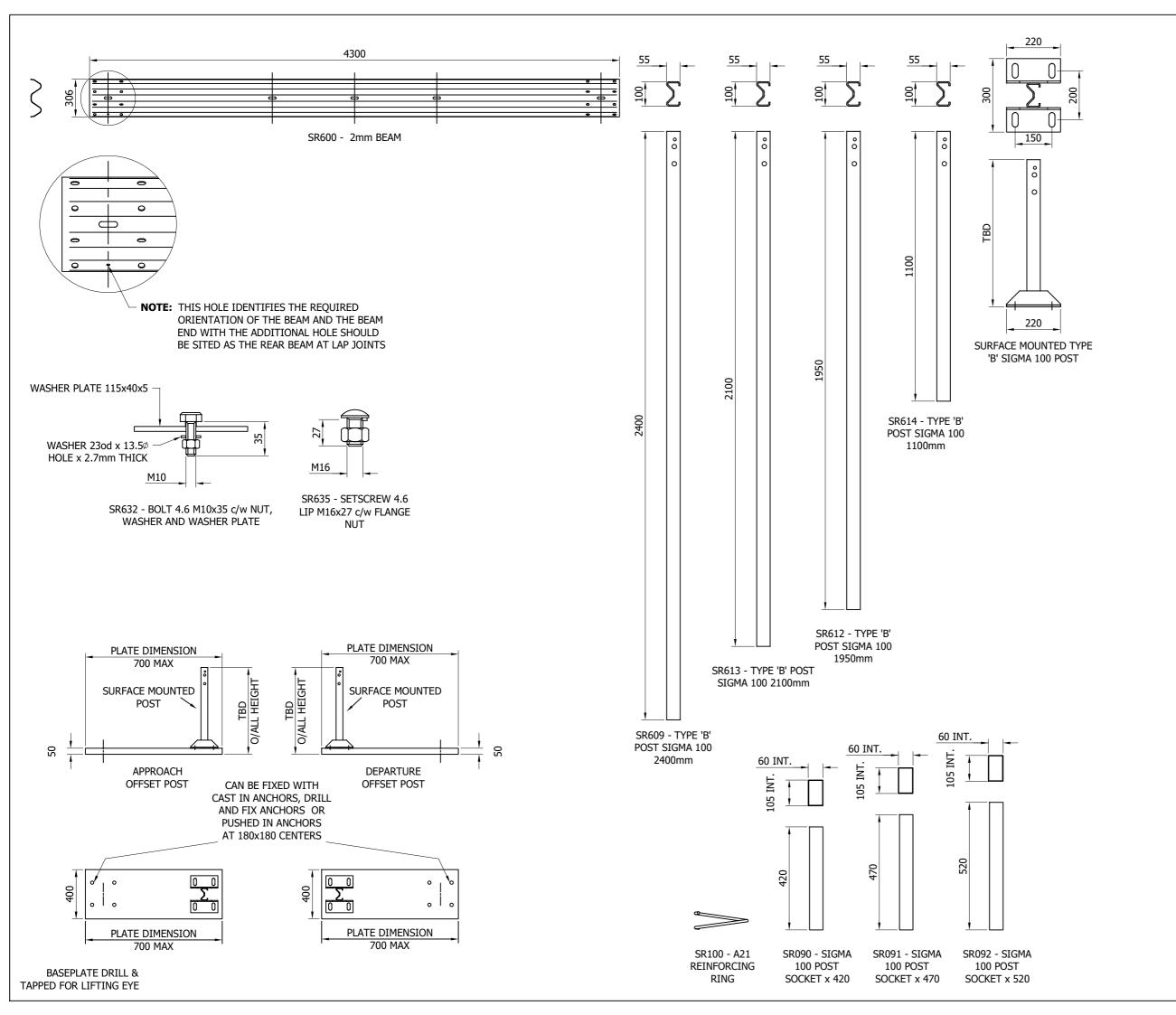
6 2 " Nail "									Assemblyr	10. 8910070
5 6 M6x5,5 TT Ma				arutex		Α2			Article no.	1132550320
4 1 Cover POLYSTONE						G-B	LACK HD		Article no.	8920508
3 1 Anchor "box "				11					Article no.	8920509
2 1 Transition pip				o e					Assembly r	no. 8920206A
1 Birsta 1P, Guardr				ardrail			Assembly no. 8910002			
Item No. Qty. Description				Material Dimension		Note				
Design. Drawn Copied Control				Control. ALN	Stand.		Аррг.	Scale 1:20	Replaces	Replaced by
				Birst Anch		•	Juardr 2.6 m	ail	Filename 8910010 Drawing no. 8910010	Date 2009-12-21 Rev.

8400

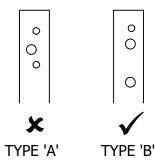
8

.on gniwe10 8910020 on priwerd 0.500198





POST TOP DRILLING ARRANGEMENT



07	31/05/22	OFFSET PLATE DETAIL CHANGED	A.D
06	25/05/22	SURFACE MOUNTED POST BASE CHANGED	A.D
05	12/02/19	MINOR DETAIL CHANGES AND TITLEBLOCK CHANGE	H.B
04	10/03/17	OFFSET PLATE REVISED	L.L
03	27/01/17	DETAILS REVISED	L.L
2.3	20/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

# MegaRail Birsta W2

N2.W4 VEHICLE RESTRAINT SYSTEM COMPONENTS SCHEMATIC

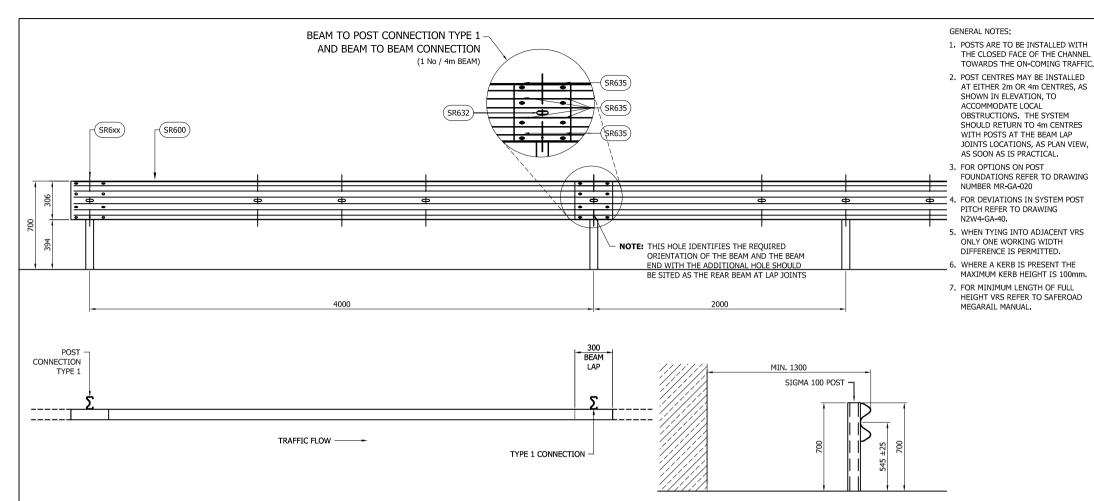
# **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

N2W4-GA-00



### MegaRail Birsta W2 **N2 A W4**

N2.W4 VEHICLE RESRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

### **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

john.cudlipp@saferoad.co.uk L.L DRAWING NUMBER:

N2W4-GA-01

MINOR DETAIL CHANGES

AND TITLEBLOCK REVISIONS

DETAILS REVISED

DETAILS REVISED

H.B

L.L

INITIAL

12/02/19

27/01/13

2.3 20/05/15

04

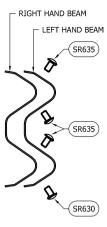
### SAFEROAD QUANTITY UK PART DESCRIPTION NUMBER BEAM "A" PROFILE 2mm SR600 1

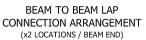
SYSTEM COMPONENT SCHEDULE - QUANTITIES / 4m BEAM

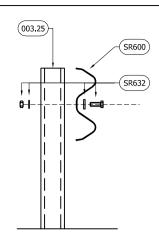
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER MR-GA-W4-02

SEE TABLE B | POST SIGMA 100

TABLE 'B' - S OF POST RE NUMBERS LENGT	FERENCE S AND
SAFEROAD UK PART NUMBER	POST LENGTH
SR614	1100
SR611	1700
SR612	1950
SR613	2100







BEAM TO POST CONNECTION TYPE 1

	BOLTING COMPO	DNENT SCHEDULE - QUANTITIES / BEAM	
BIRSTA MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION
1122160250	SR635	SETSCREW 4.6 LIP M16x27 c/w FLANGE NUT	8 (+8)

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST				
OUTIMEX MANUFACTURING REFERENCE	SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION	
1128121150A SR632		BOLT 4.8 M10x35 c/w NUT, WASHER 11 $\phi$ HOLE AND WASHER PLATE 115 x 40 x 5mm	1	
QUANTITY OF CONNECTION TYPES / 4m BEAM				
			1 (+1)	

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

NUMBERS IN THE SCHEDULES SUFFIXED (+)
 DENOTES THE ADDITIONAL QUANTITY OF
 COMPONENTS REQUIRED FOR EXTREME ENDS
 OF INDIVIDUAL RUNS OF BARRIER,

04	12/02/19	TITLEBLOCK CHANGES	н.в
03	27/01/17	DETAILS REVISED	L.L
2.4	20/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

### MegaRail Birsta W2 N2 A W4

N2.W4 VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

### **SAFEROAD®**

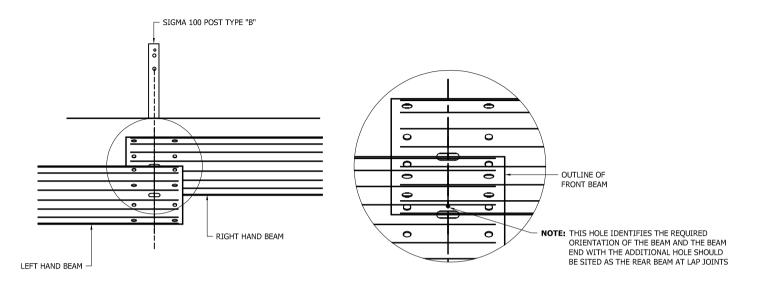
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

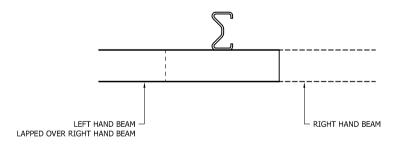
REVn:

N2W4-GA-02

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



TRAFFIC	EL OW	



04	12/02/19	TITLEBLOCK CHANGES	н.в
03	27/01/17	DETAILS REVISED	L.L
2.3	20/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

### MegaRail Birsta W2 N2 A W4

N2.W4 VEHICLE RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR W4 MEGARAIL SYSTEM

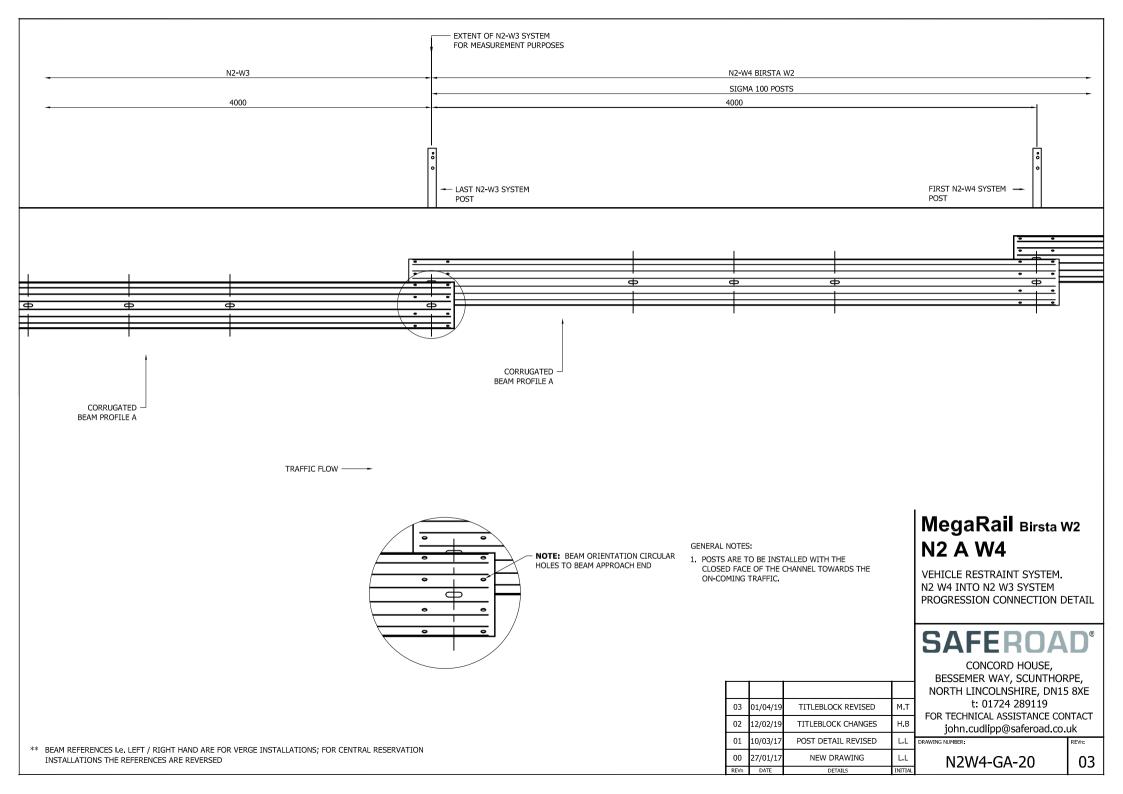
# **SAFEROAD®**

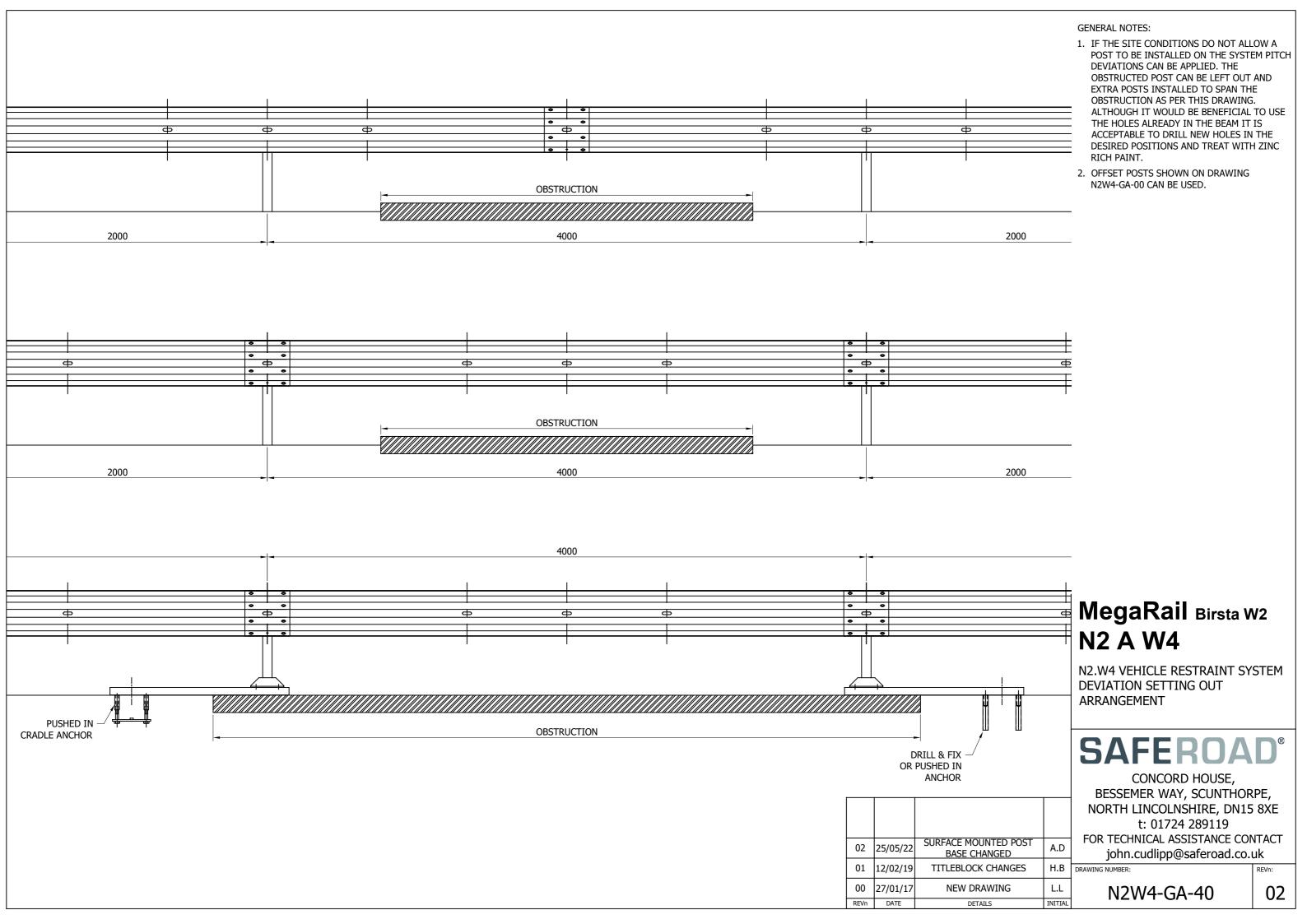
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

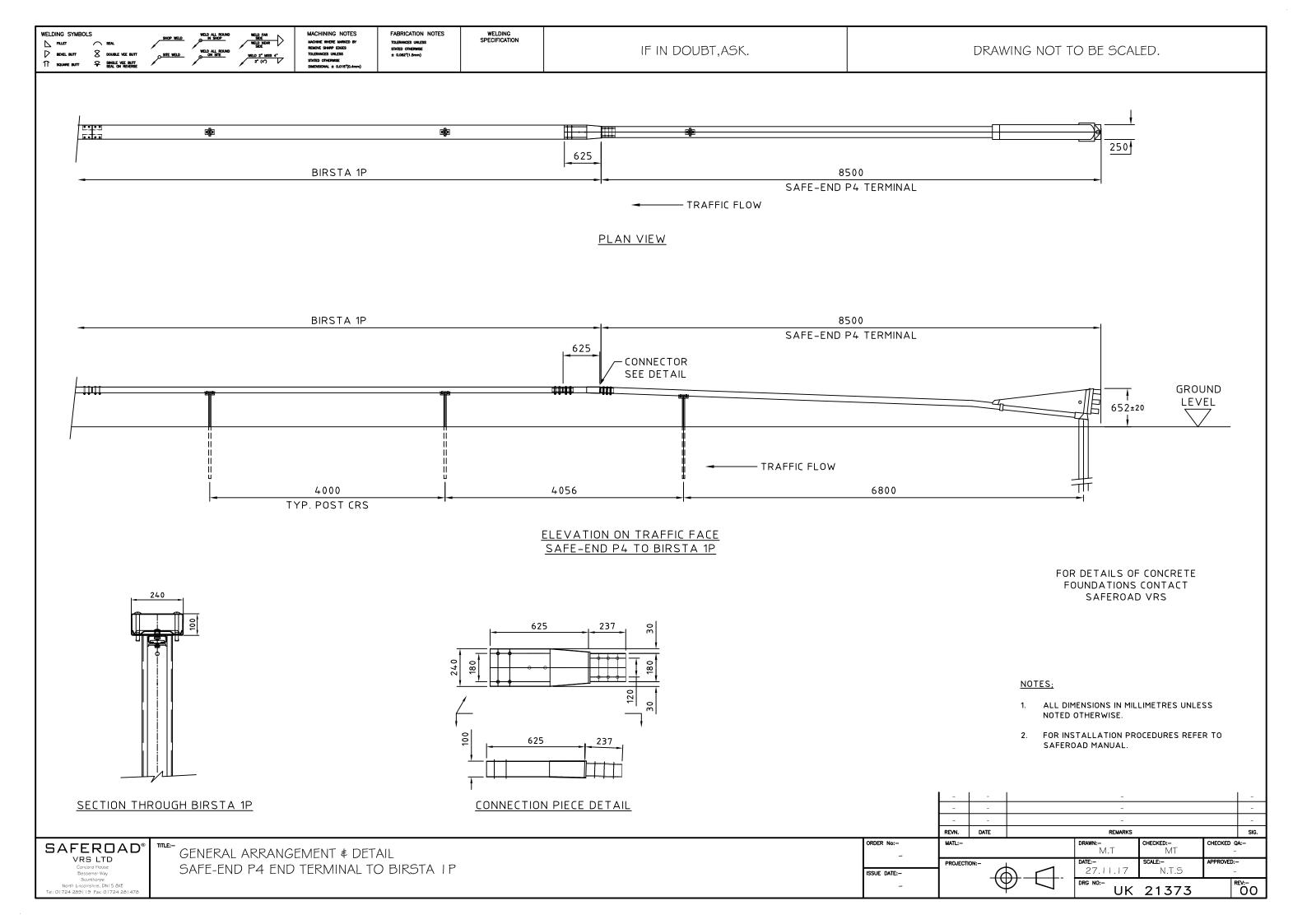
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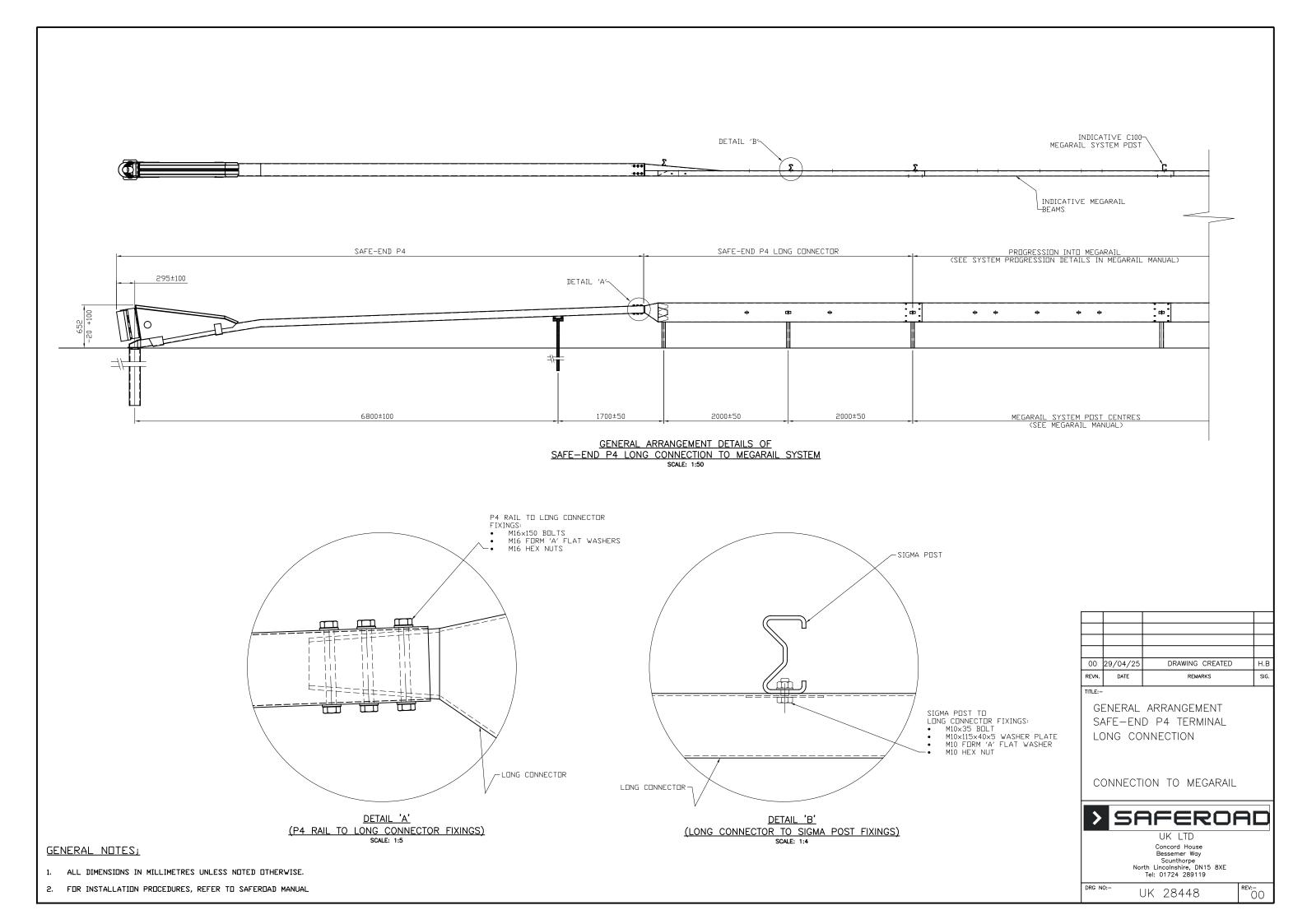
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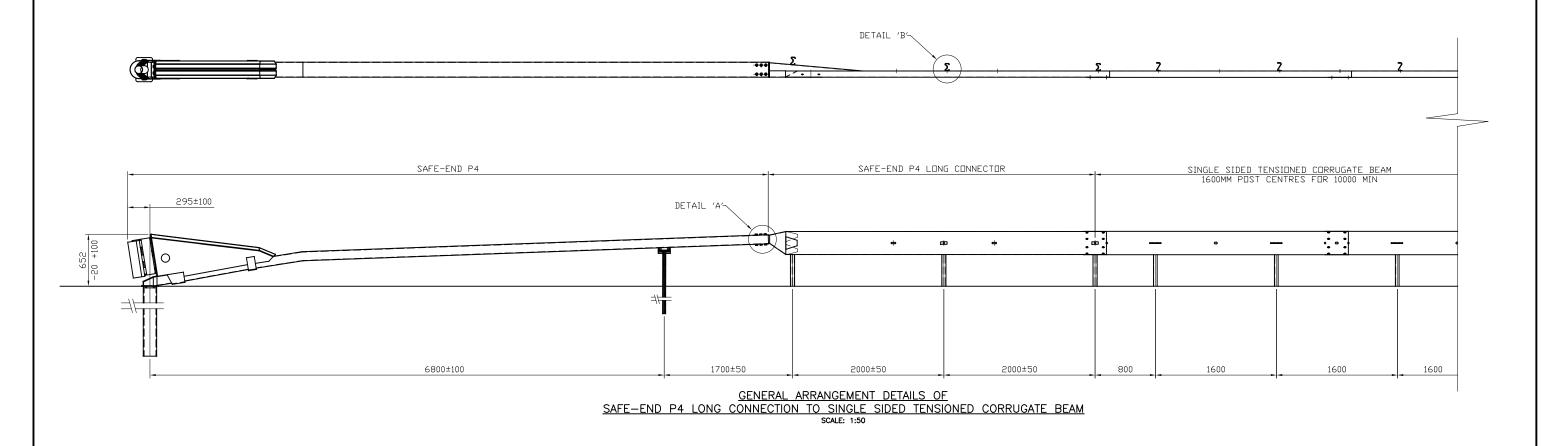
N2W4-GA-03

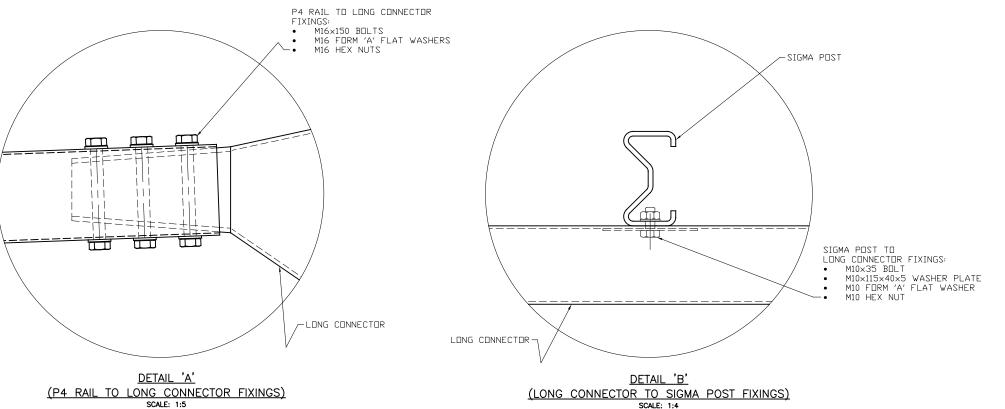




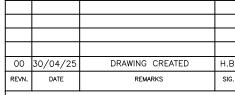








- 1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- 2. FOR INSTALLATION PROCEDURES, REFER TO SAFERDAD MANUAL



TITLE:

DRG NO:-

GENERAL ARRANGEMENT SAFE-END P4 TERMINAL LONG CONNECTION

CONNECTION TO TENSIONED CORRUGATE BEAM



UK LTD

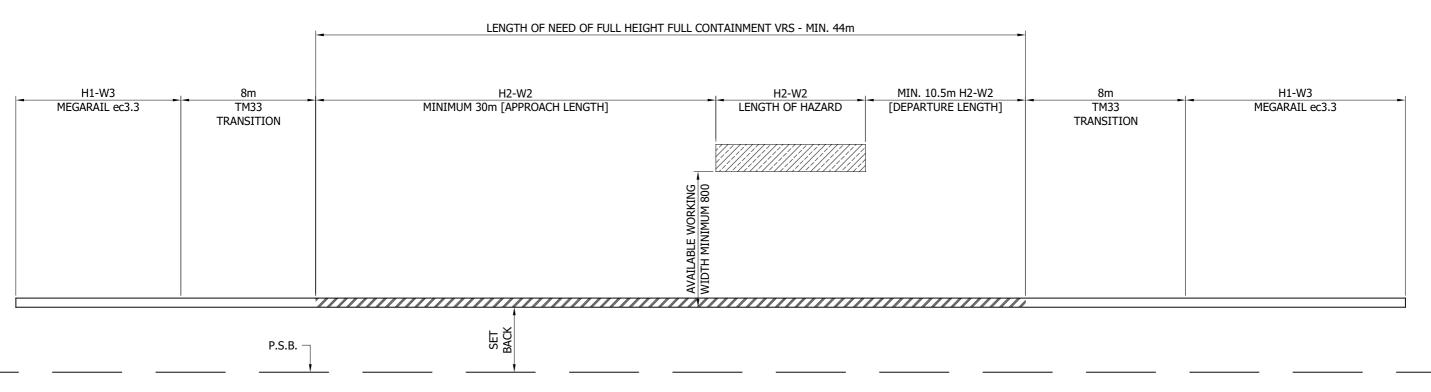
Concord House
Bessemer Way
Scunthorpe
North Lincolnshire, DN15 8XE
Tel: 01724 289119

111/ 28/15

UK 28455

REV:-00

- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- 2. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. MINIMUM LENGTH OF FULL HEIGHT VRS IS 44m



TRAFFIC FLOW ————

# MegaRail sk H2 A W2 VI2

H2.W2 VEHICLE RESTRAINT SYSTEM SYSTEM PROGRESSION SCHEMATIC FOR H2 W2 PROTECTION TO HAZARD

# **SAFEROAD®**

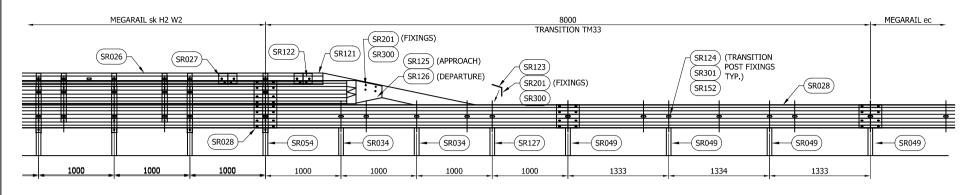
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

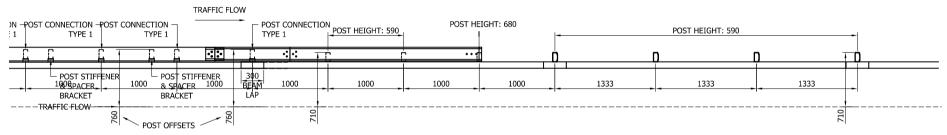
FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

RAWING NUMBER:

H2W2-GA-10

				F0
02	01.06.22	E-MAIL ADDRESS CHANGED	A.D	FO
01	10.01.19	TITLE DETAILS REVISED	M.T	DRA
00	17.10.18	DRAWING CREATED	M.T	
REVn	DATE	DETAILS	INITIAL	





POST LENGTHS DETAILED WITHIN GA & TABLE ARE EXAMPLES OF LENGTHS AVAILABLE, LENGTH/FOUNDATION VARIATIONS ARE AVAILABLE AS SHOWN ON GA-00, AS REQUIRED VIA SOIL TESTING PROCEDURE

### GENERAL NOTES:

- 1. TO BE READ IN CONJUNCTION WITH DRG. Nos. H2W2-GA-00, H2W2-GA-01 & H2W2-GA-02
- 2. DEPARTURE TRANSITION SHOWN, APPROACH SIMILAR BUT HANDED. CODES AS SHOWN.

POST C 125	TOP RAIL T		
	\$		
	POST C 125	210	
	Y		
		F 089	

TABLE 'A' - TRANSITION COMPONENT SCHEDULE - QTY'S 1 No. DEPARTURE TRANSITION			
SAFEROAD PART NUMBER	DESCRIPTION	QUANTITY	
SR122	BOX PROFILE JOINT	1	
SR121	BOX PROFILE LOWERING	1	
SR125	CONNECTION BEAM POS. D - APPROACH	0	
SR126	CONNECTION BEAM POS. C - DEPARTURE	1	
SR028	sk BEAM "A" PROFILE	2	
SR123	ATTACHMENT ANGLE 100	1	
SR049	'C' POST c/w BRACKET 1100 LONG	6	
SR127	'C' POST 125 x 1100 x 5mm	1	
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER			

H2W2-GA-02

03	10.01.19	TITLE DETAILS REVISED	м.т
02	28.03.17		M.T
01	10.03.17		M.T
00 REVn	08.02.17	DRAWING CREATED  DETAILS	M.T INITIAL

### MegaRail sk **H2 A W2 VI2**

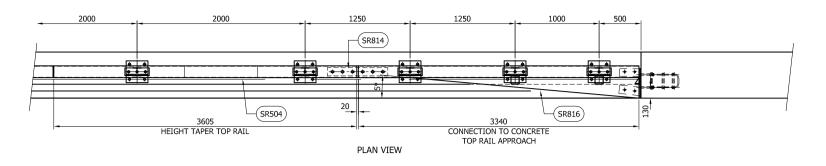
**H2.W2 VEHICLE RESTRAINT SYSTEM** TM33 TRANSITION ARRANGEMENT

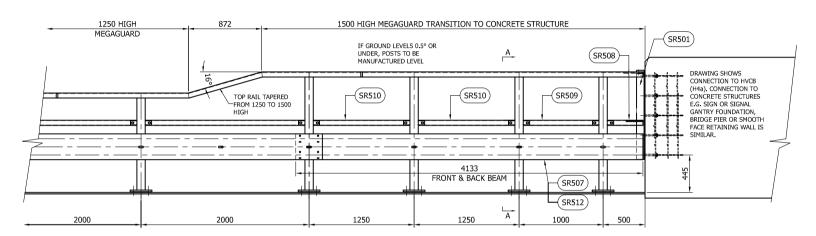
### SAFEROAD

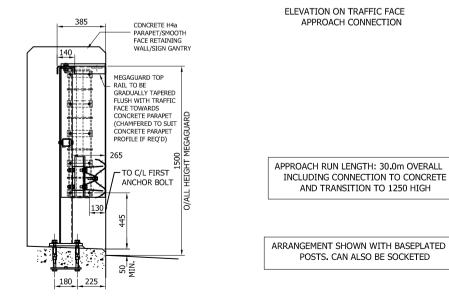
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

H2W2-GA-50



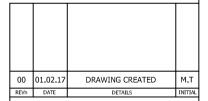




SECTION A-A

### GENERAL NOTES;

- ALL DIMENSIONS IN MILLIMETRES UNLESS
   NOTED OTHERWISE.
- CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- 3. FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. №. SB/155, EXCEPT MATERIAL TO BE STAINLESS STEEL GRADE 1.4362.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET. DESIGN TRO
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM.
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm



### MegaGuard H2 W1

CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) APPROACH / LEFT HAND GENERAL ARRANGEMENT

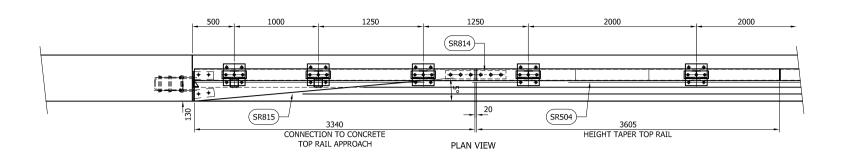
### **SAFEROAD®**

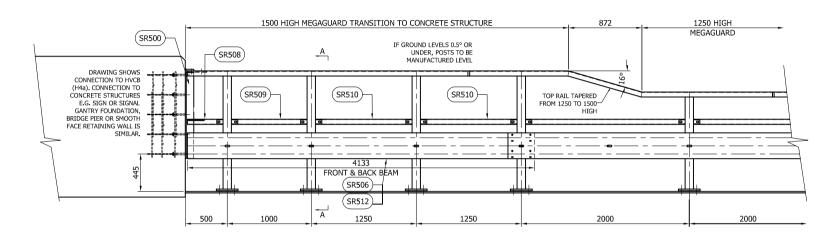
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
e: john.cudlipp@saferoad.co.uk

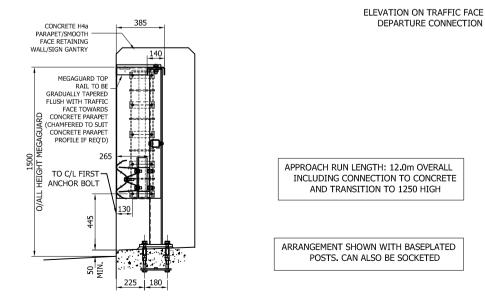
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REVn:

H2W1-GA-05



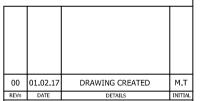




SECTION A-A

### GENERAL NOTES;

- ALL DIMENSIONS IN MILLIMETRES UNLESS
   NOTED OTHERWISE.
- CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. No. SB/155, EXCEPT MATERIAL TO BE STAINLESS STEEL GRADE 1.4362.
- 4. MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET. DESIGN TRN
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM.
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm.



### MegaGuard H2 W1

CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) DEPARTURE / RIGHT HAND GENERAL ARRANGEMENT

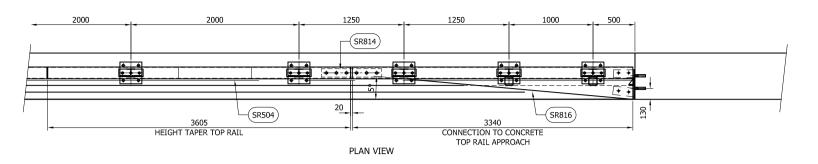
### **SAFEROAD®**

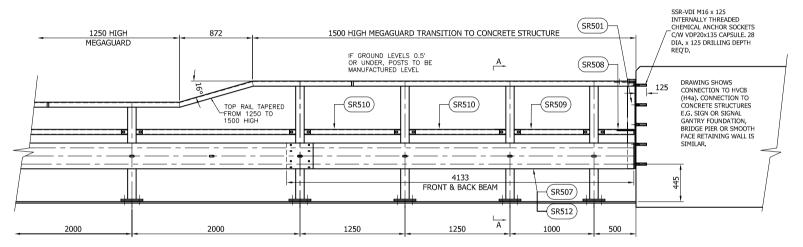
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
e: john.cudlipp@saferoad.co.uk

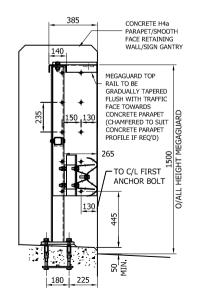
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H2W1-GA-06







### ELEVATION ON TRAFFIC FACE APPROACH CONNECTION

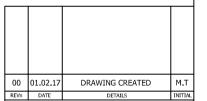
APPROACH RUN LENGTH: 30.0m OVERALL INCLUDING CONNECTION TO CONCRETE AND TRANSITION TO 1250 HIGH

ARRANGEMENT SHOWN WITH BASEPLATED POSTS. CAN ALSO BE SOCKETED

SECTION A-A

### GENERAL NOTES;

- ALL DIMENSIONS IN MILLIMETRES UNLESS
   NOTED OTHERWISE,
- CONNECTION APPLICABLE TO; CONCRETE H4a
   PARAPET, SMOOTH FACE RETAINING WALL OR
   SIGN GANTRY.
- ANCHOR IN CONCRETE STRUCTURE TO BE SSR-VDI M16 x 125 INTERNALLY THREADED ANCHOR C/W VDP20 x 135 CAPSULE. 28 DIA. x 125mm DRILLING DEPTH REQ'D. 10 No. ANCHORS REQ'D PER CONNECTION.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET. DESIGN TBD.
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM,
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm.



### MegaGuard H2 W1

CONNECTION TO CONCRETE STRUCTURE (DRILL & FIX) APPROACH / LEFT HAND GENERAL ARRANGEMENT

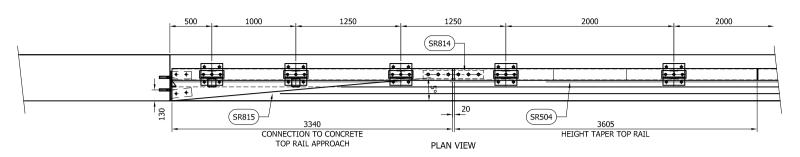
### **SAFEROAD®**

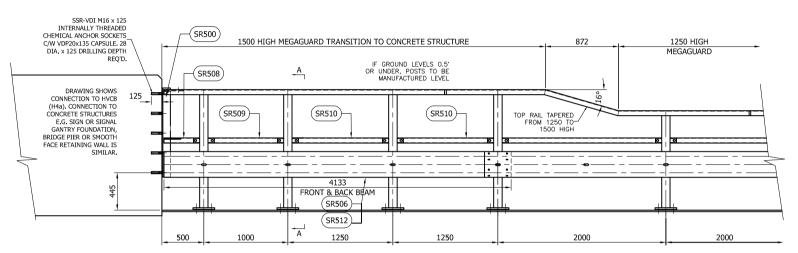
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
e: john.cudlipp@saferoad.co.uk

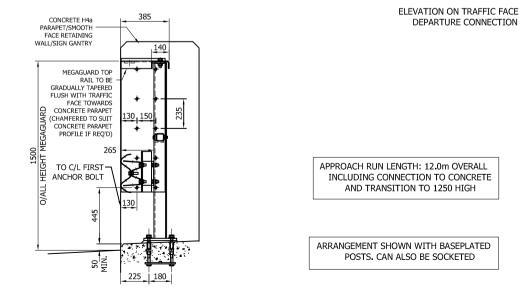
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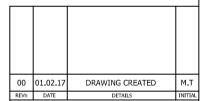
H2W1-GA-07







- 1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE,
- 2. CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- ANCHOR IN CONCRETE STRUCTURE TO BE SSR-VDI M16 x 125 INTERNALLY THREADED ANCHOR C/W VDP20 x 135 CAPSULE, 28 DIA, x 125mm DRILLING DEPTH REO'D, 10 No. ANCHORS REO'D PER CONNECTION.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET, DESIGN
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM,
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm.



### MegaGuard **H2 W1**

CONNECTION TO CONCRETE STRUCTURE (DRILL & FIX) DEPARTURE / RIGHT HAND GENERAL ARRANGEMENT

### **SAFEROAD®**

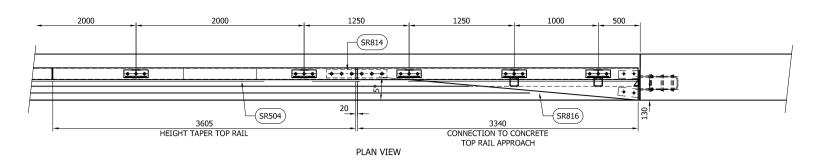
CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT e: john.cudlipp@saferoad.co.uk

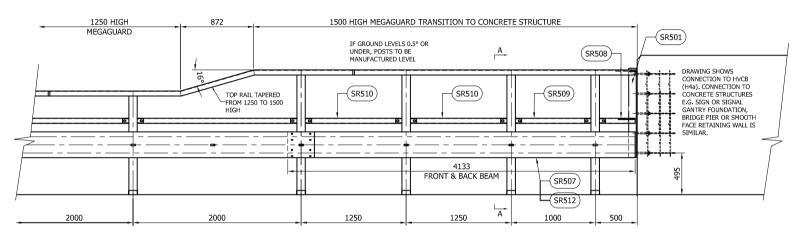
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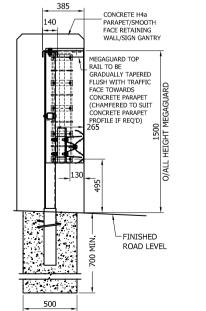
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H2W1-GA-08

### SECTION A-A







SECTION A-A

ELEVATION ON TRAFFIC FACE APPROACH CONNECTION

APPROACH RUN LENGTH: 30.0m OVERALL INCLUDING CONNECTION TO CONCRETE AND TRANSITION TO 1250 HIGH

ARRANGEMENT SHOWN WITH SOCKETED POSTS. CAN ALSO BE BASEPLATED

### GENERAL NOTES;

- ALL DIMENSIONS IN MILLIMETRES UNLESS
  NOTED OTHERWISE.
- CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. No. SB/155, EXCEPT MATERIAL TO BE STAINLESS STEEL GRADE 1.4362.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET, DESIGN TEN
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM.
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm

00	06.02.19	DRAWING CREATED	м,т
REVn	DATE	DETAILS	INITIAL

### MegaGuard H2 W1

CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) APPROACH / LEFT HAND SOCKETED GENERAL ARRANGEMENT

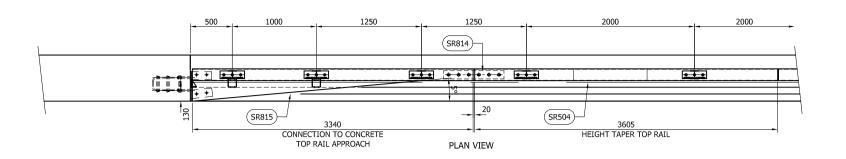
### SAFEROAD

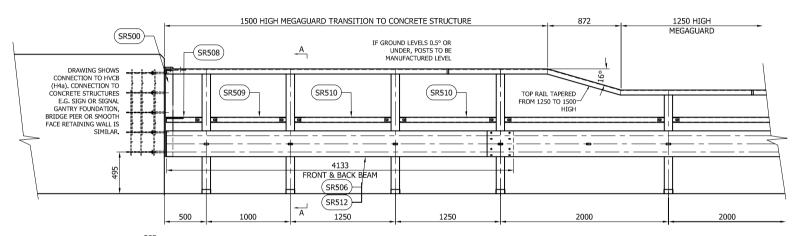
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
e: john.cudlipp@saferoad.co.uk

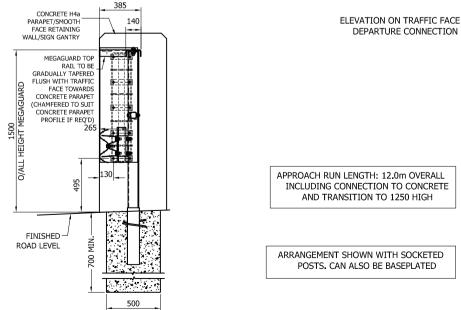
DRAWING NUMBER:

REVn:

H2W1-GA-12



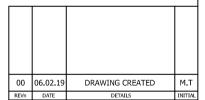




SECTION A-A

### GENERAL NOTES;

- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE,
- CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. No. SB/155, EXCEPT MATERIAL TO BE STAINLESS STEEL GRADE 1.4362.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET. DESIGN TRD
- REACTION BRACKET TO ACCOMMODATE H2/W1 MEGAGUARD SYSTEM.
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- 7. HEIGHT TO BE MAXIMUM OF 1500mm. BARRIER HEIGHT CAN BE REDUCED TO SUIT A MINIMUM CONCRETE STRUCTURE HEIGHT OF 1250mm.



### MegaGuard H2 W1

CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) DEPARTURE / RIGHT HAND SOCKETED GENERAL ARRANGEMENT

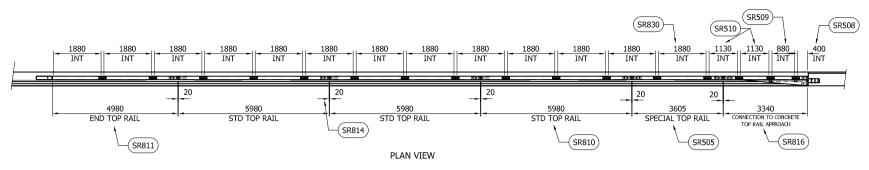
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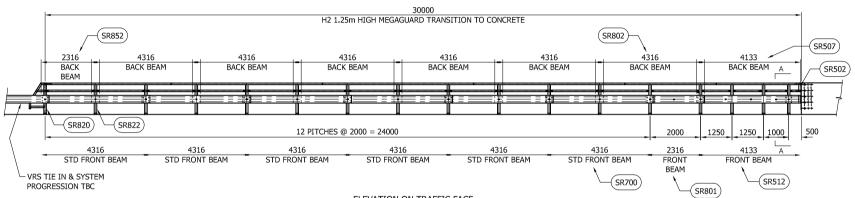
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
e: john.cudlipp@saferoad.co.uk

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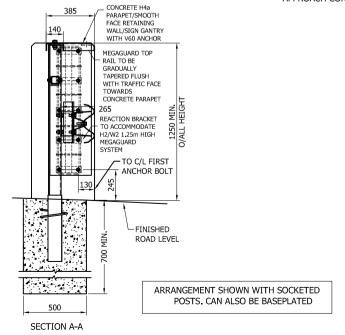
REVn:

H2W1-GA-13





ELEVATION ON TRAFFIC FACE APPROACH CONNECTION



FU	JLL REQUIRED QUANTITY PER APPROACH/LEFT HAND 30.0m R	UN
CODE	DESCRIPTION	QTY
SR502	REACTION BRACKET APPROACH FOR 1250mm HIGH	1
SR822	INTERMEDIATE SOCKETED POST 1734mm LG	16
SR820	LEFT HAND END SOCKETED POST 1734mm LG	1
SR825	MEGAGUARD POST SOCKET 525mm LG	17
SR100	REINFORCING RING (ITEM A21)	17
SR831	SPACER BRACKET 180mm LG	17
SR508	INTERMEDIATE RAIL 400mm LG	1
SR509	INTERMEDIATE RAIL 880mm LG	1
SR510	INTERMEDIATE RAIL 1130mm LG	2
SR830	INTERMEDIATE RAIL 1880mm LG	13
SR816	TOP RAIL TO CONCRETE APPROACH 3340mm LG	1
SR505	SPECIAL TOP RAIL 3605mm LG	1
SR810	STANDARD TOP RAIL 5980mm LG	3
SR811	END TOP RAIL 4980mm LG	1
SR507	BACK BEAM TO CONCRETE APPROACH 4133mm LG	1
SR802	STANDARD BACK BEAM 4316mm LG	6
SR852	BACK BEAM 2316mm LG	1
SR512	FRONT BEAM TO CONCRETE 4133mm LG	1
SR801	FRONT BEAM 2316mm LG	1
SR700	STANDARD FRONT BEAM (VIK) 4316mm LG	6

### GENERAL NOTES;

- 1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- 2. CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY
- FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. No. SB/155.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET. DESIGN TBD.
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- ARRANGEMENT & REACTION BRACKET SUITABLE FOR 1.25m MIN. O/ALL HEIGHT MEGAGUARD SYSTEM.

01	07.05.19	NOTES REVISED	M.T
00	18.02.19	DRAWING CREATED	M.T
REVn	DATE	DETAILS	INITIAL

### MegaGuard H2 W1

1.25m CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) APPROACH / LEFT HAND SOCKETED FULL 30.0m GENERAL ARRANGEMENT

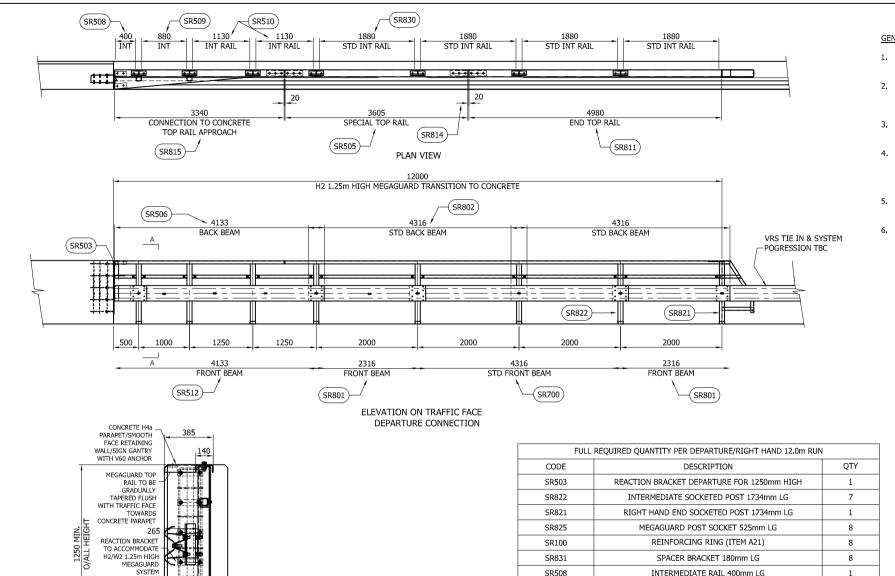
### SAFEROAD

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

DRAWING NUMBER:

REVn:

H2W1-GA-16



ARRANGEMENT SHOWN WITH SOCKETED

POSTS. CAN ALSO BE BASEPLATED

SR509

SR510

SR830

SR815 SR505

SR811

SR506

SR802

SR512

SR801

SR700

INTERMEDIATE RAIL 880mm LG

INTERMEDIATE RAIL 1130mm LG
INTERMEDIATE RAIL 1880mm LG

TOP RAIL TO CONCRETE DEPARTURE 3340mm LG

SPECIAL TOP RAIL 3605mm LG

END TOP RAIL 4980mm LG

BACK BEAM TO CONCRETE DEPARTURE 4133mm LG

STANDARD BACK BEAM 4316mm LG

FRONT BEAM TO CONCRETE 4133mm LG

FRONT BEAM 2316mm LG

STANDARD FRONT BEAM (VIK) 4316mm LG

TO C/L FIRST

ANCHOR BOLT

FINISHED-

MIN

9

500

SECTION A-A

ROAD LEVEL

### GENERAL NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS
   NOTED OTHERWISE.
- CONNECTION APPLICABLE TO; CONCRETE H4a PARAPET, SMOOTH FACE RETAINING WALL OR SIGN GANTRY.
- FOR DETAILS OF STRUCTURE ANCHORAGE, ITEM V60, SEE DRG. No. SB/155.
- MEGAGUARD TOP RAIL TO BE TAPERED TO BE FLUSH WITH TRAFFIC FACE AT END OF MEGAGUARD & CONCRETE PARAPET, DESIGN TRO
- TOTAL LENGTH OF BARRIER TO BE AS TD19/06, CHAPTER 3 TABLE 3/1.
- ARRANGEMENT & REACTION BRACKET SUITABLE FOR 1.25m MIN. O/ALL HEIGHT MEGAGUARD SYSTEM

01	07.05.19	NOTES REVISED	M.T
00	18.02.19	DRAWING CREATED	м.т
REVn	DATE	DETAILS	INITIAL

### MegaGuard H2 W1

1

2

4

1

1

1

2

1

2

1

1.25m CONNECTION TO CONCRETE STRUCTURE (V60 CRADLE) DEPART / RIGHT HAND SOCKETED FULL 12.0m GENERAL ARRANGEMENT

### SAFEROAD®

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

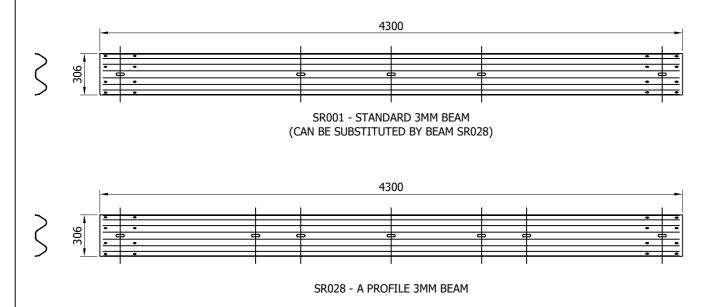
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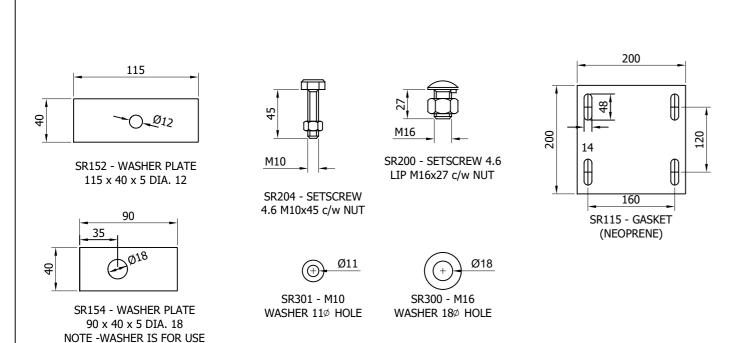
110144 64 4

DRAWING NUMBER:

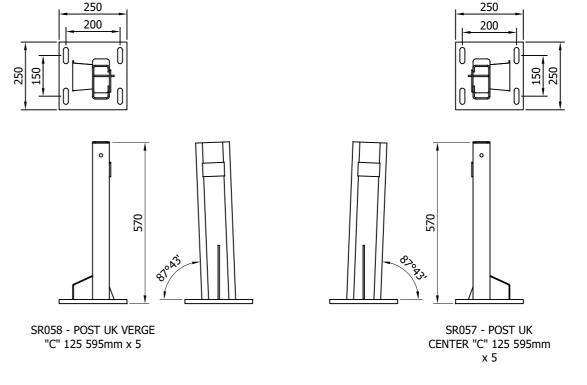
KEVII:

H2W1-GA-17





WITH THE HOLDING DOWN FIXINGS



**GENERAL NOTES:** 

1. CONCRETE TRENCH ONLY - MINIMUM LENGTH 4M

SPECIAL DETAIL APPROVED BY SAFEROAD

3. CAN CONNECT TO HYBRID GA72 OR GA120/GA140 ONLY UNDER

5. VERGE AND CENTRAL RESERVE POSTS ARE HANDED AND **NOT** 

6. WHERE A KERB IS PRESENT THE MAXIMUM HEIGHT IS 100mm.

SHOULD THE KERB BE HIGHER THAN 100mm AND THE BARRIER SETBACK LESS THAN 250mm FROM FACE OF KERB, THE SYSTEM

HEIGHT IS MEASURED FROM THE CARRIAGEWAY. IF THE SETBACK IS GREATER THAN 250mm FROM THE FACE OF KERB, THE SYSTEM

HEIGHT IS MEASURED FROM THE TOP OF THE KERB OR ADJACENT

2. FOR DEVIATIONS SEE H1W2-GA-40

4. SYSTEM HAS A V.I. RATING OF VI3

INTERCHANGEABLE.

GROUND LEVEL.

06	08/07/22	DETAILS CHANGED	A.D
05	19/11/19	BEAM DETAILS ADDED	М.Т
04	01/04/19	BEAM DETAILS REVISED	M.T
03	12/02/19	TITLEBLOCK REVISED	н.в
02	31/01/17	STOCK & CODES REVISED	L.L
1.3	20/05/15	DETAILS REVISED	М.Т
REVn	DATE	DETAILS	INITIAL

NOTE 6 ADDED

# MegaRail bs H1 W2 (VI 3)

07 22/09/22

H1.W2 VEHICLE RESTRAINT SYSTEM COMPONENTS SCHEMATIC

# **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119

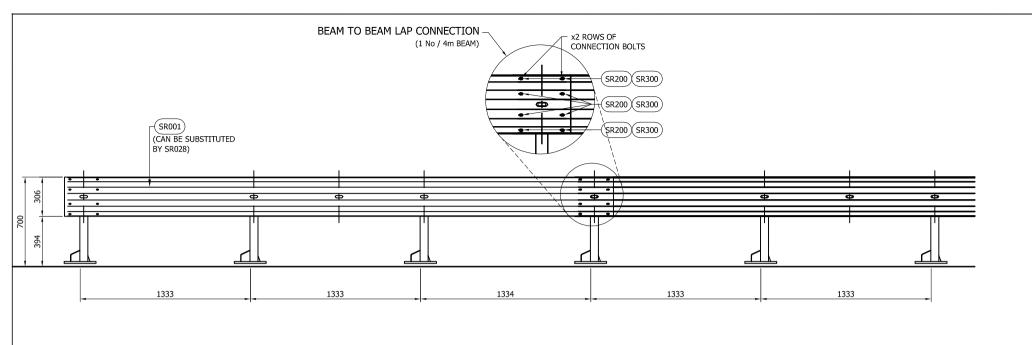
e: john.cudlipp@saferoad.co.uk

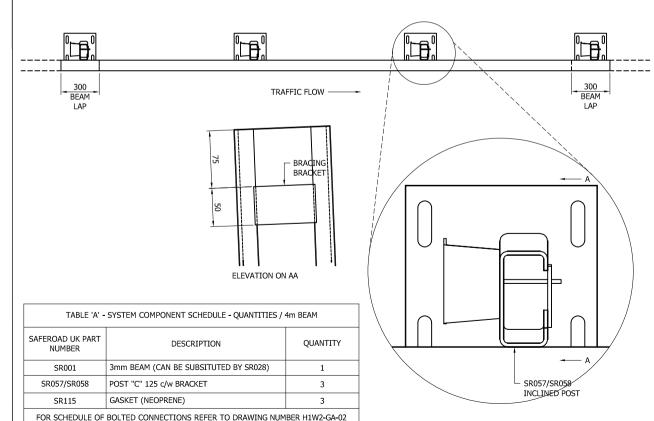
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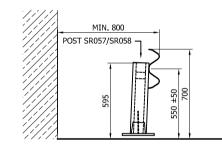
REVn:

A.D

H1W2-GA-00







- POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 2. USE AN M16 FIXING ABLE TO RESIST A TENSILE LOAD OF 50kN
- 3. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
- 4. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 100mm.
- 5. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.

04	19/11/19		н.в
03	12/02/19	MINOR CHANGES AND TITLEBLOCK REVISED	н.в
02	31/01/17	DETAILS & CODES REVISED	L.L
1.4	20/05/15	DETAILS REVISED	M.T
REVn	DATE	DETAILS	INITIA

### MegaRail bs H1 W2 (VI 3)

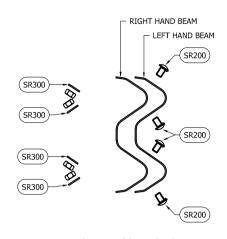
H1.W2 VEHICLE RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

# **SAFEROAD®**

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

DRAWING NUMBER

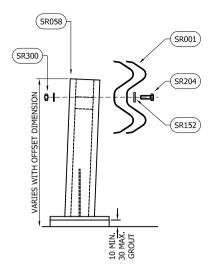
H1W2-GA-01



BEAM TO BEAM CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM				
SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION		
SR200	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)		
SR300	WASHER M16 18¢ HOLE	8 (+8)		

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



BEAM TO POST CONNECTION TYPE 1

ВС	BOLTING COMPONENT SCHEDULE - QUANTITIES / POST				
SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION			
SR204	SETSCREW 4.6 M10 x 45 c/w NUT	1			
SR152	WASHER PLATE 115 x 40 x 5 DIA. 12	1			
SR301	M10 WASHER 11¢ HOLE	1			
	QUANTITY OF CONNECTION TYPES / 4m BEAM				
		3 (+1)			

NUMBERS IN THE SCHEDULES SUFFIXED (+)
 DENOTES THE ADDITIONAL QUANTITY OF
 COMPONENTS REQUIRED FOR EXTREME ENDS
 OF INDIVIDUAL RUNS OF BARRIER,

03	12/02/19	CODE CHANGES AND TITLEBLOCK REVISED	н.в
02	31/01/17	DETAILS REVISED	L.L
1.2	20/05/15	DETAILS REVISED	м.т
REVn	DATE	DETAILS	INITIAL

### MegaRail bs H1 W2 (VI 3)

H1.W2 VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

# **SAFEROAD®**

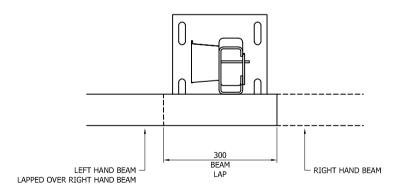
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
e: john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

H1W2-GA-02

# INCLINED C125 POST INCLINED C125 POST RIGHT HAND BEAM NOTE: BEAM ORIENTATION CIRCULAR HOLES TO BEAM APPROACH END TEARDROP HOLES TO BEAM DEPARTURE END TRAFFIC FLOW



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

### GENERAL NOTES:

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

03	12/02/19	TITLEBLOCK REVISED	н.в
02	31/01/17	DETAILS REVISED	L.L
1.1	20/05/15	DETAILS REVISED	M.T
REVn	DATE	DETAILS	INITIAL

### MegaRail bs H1 W2 (VI 3)

H1.W2 VEHICLE RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR H1 A W2 SYSTEM.

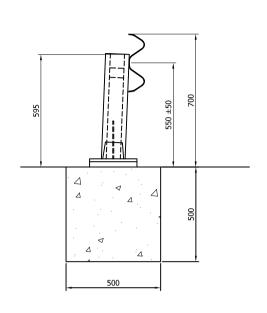
# **SAFEROAD®**

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

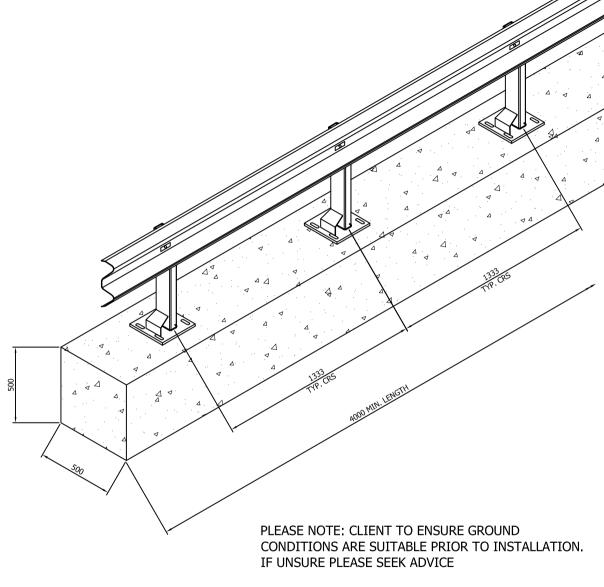
DRAWING NUMBER:

REVn:

H1W2-GA-03



TYPICAL SECTION THROUGH



MINIMUM CONCRETE GRADE: ST5 C20/C25

02	31/01/17	DETAILS REVISED	L.L
1.4	20/05/15	DETAILS REVISED	м.т
REVn	DATE	DETAILS	INITIAL

### MegaRail bs H1 W2 (VI 3)

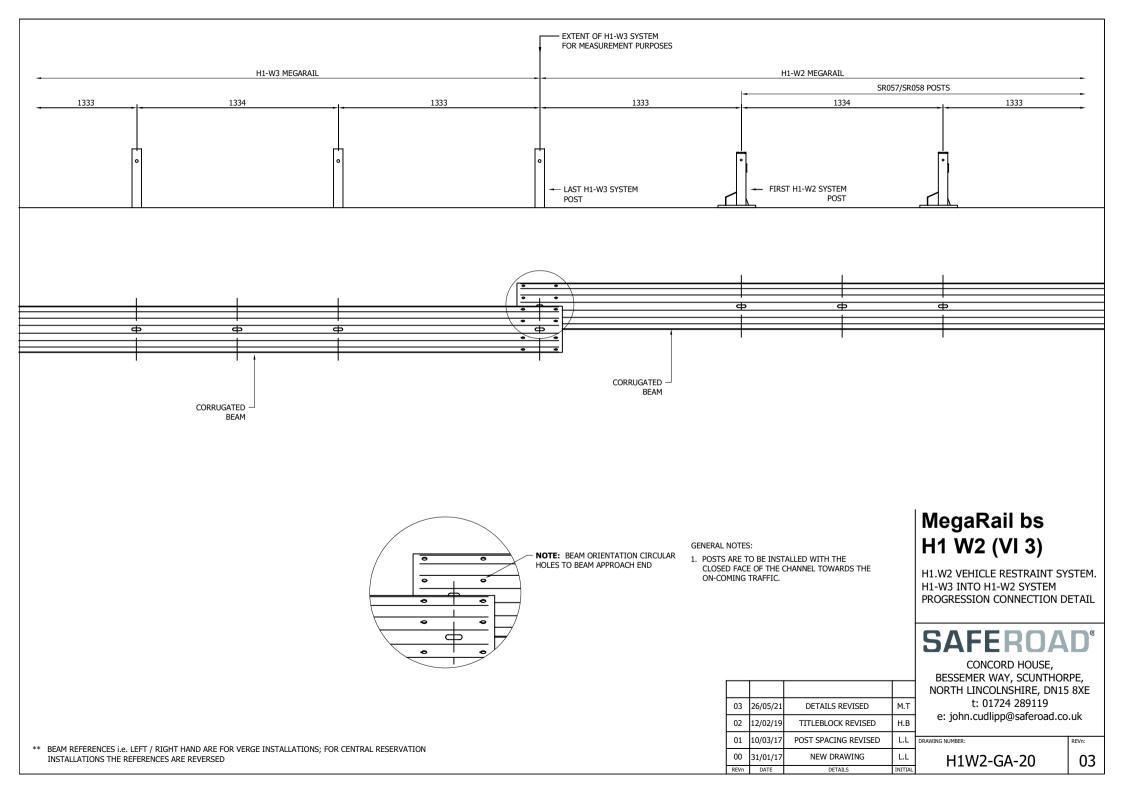
# **SAFEROAD®**

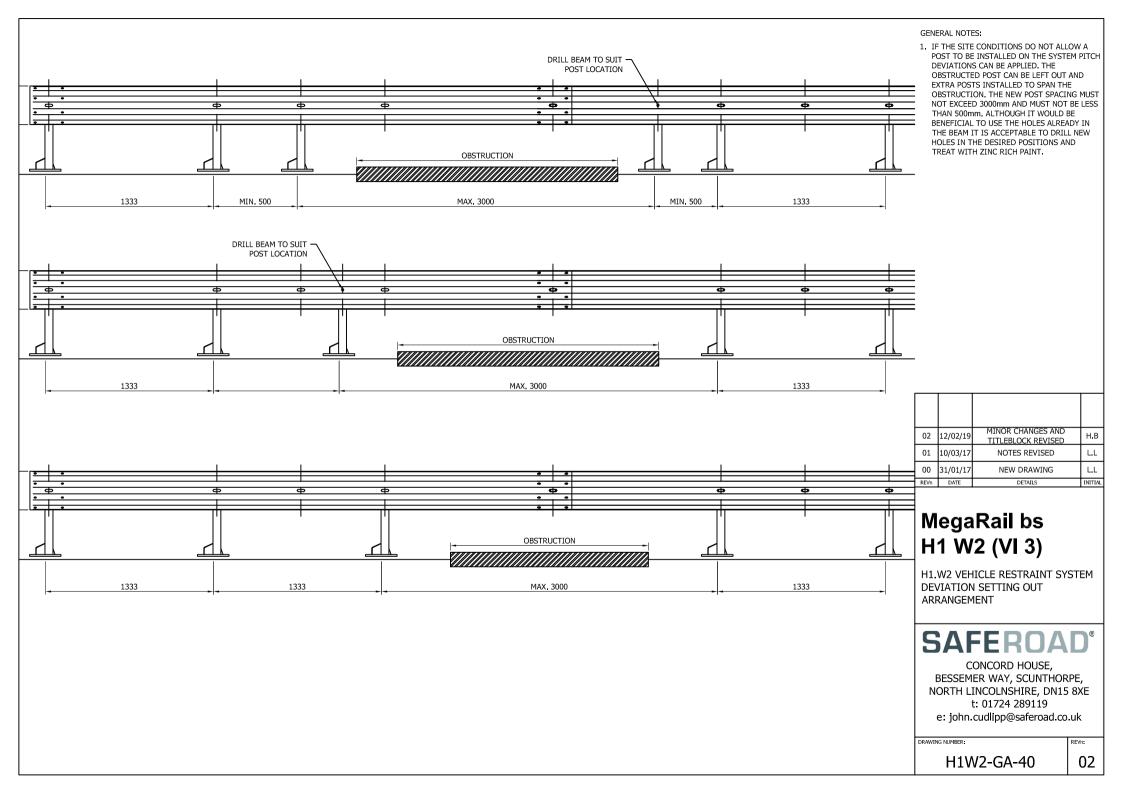
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
e: john.cudlipp@saferoad.co.uk

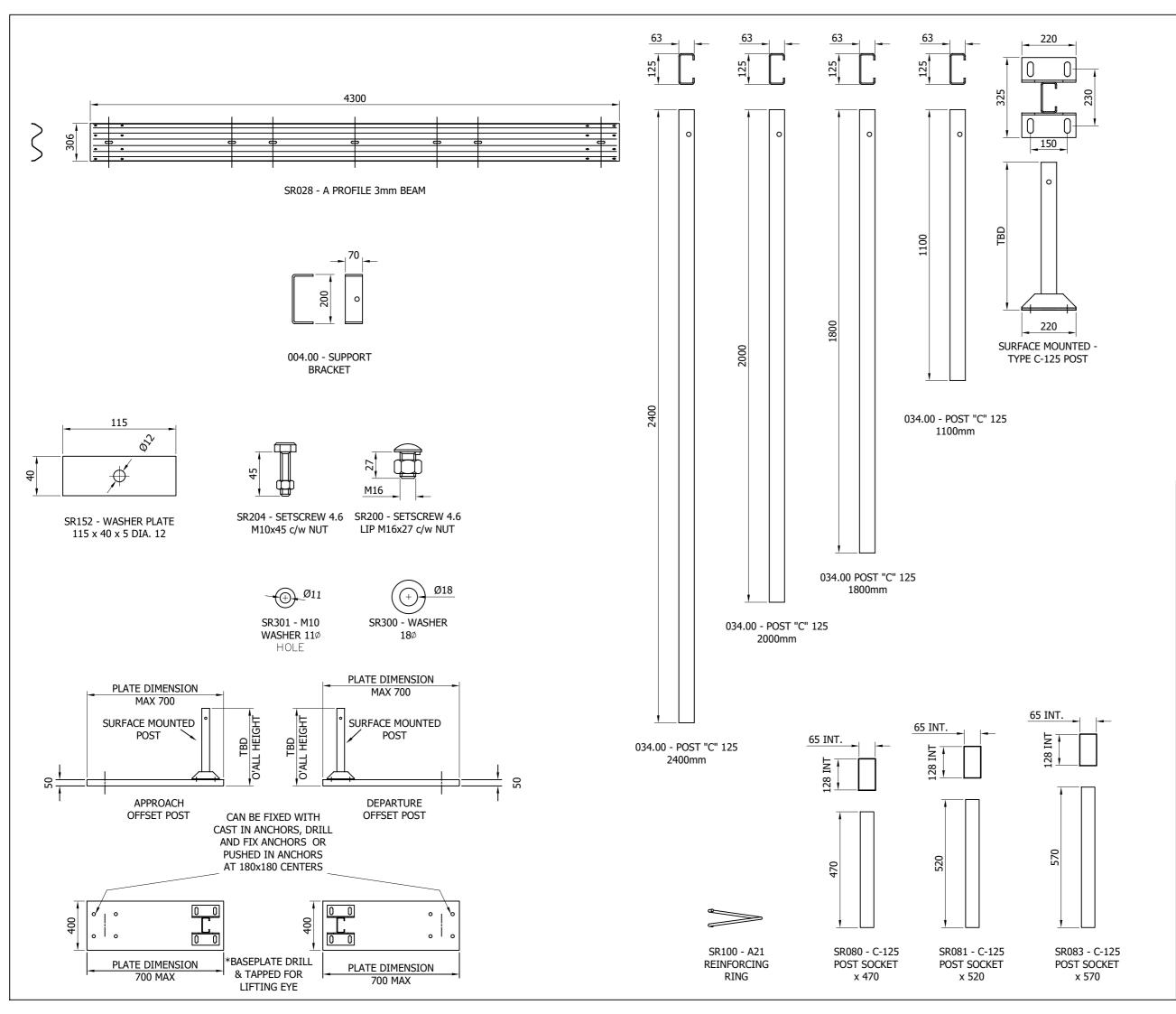
DRAWING NUMBER:

REVr

H1W2-GA-04







02	31/05/22	CHANGED	A.D
01	25/05/22	SURFACE MOUNTED POST BASE CHANGED	A.D
00	15/01/20	DRAWING CREATED	М.Т
REVn	DATE	DETAILS	INITIAL

# Super-Rail ES 1.0 L1 W2

VEHICLE RESTRAINT SYSTEM COMPONENTS SCHEMATIC

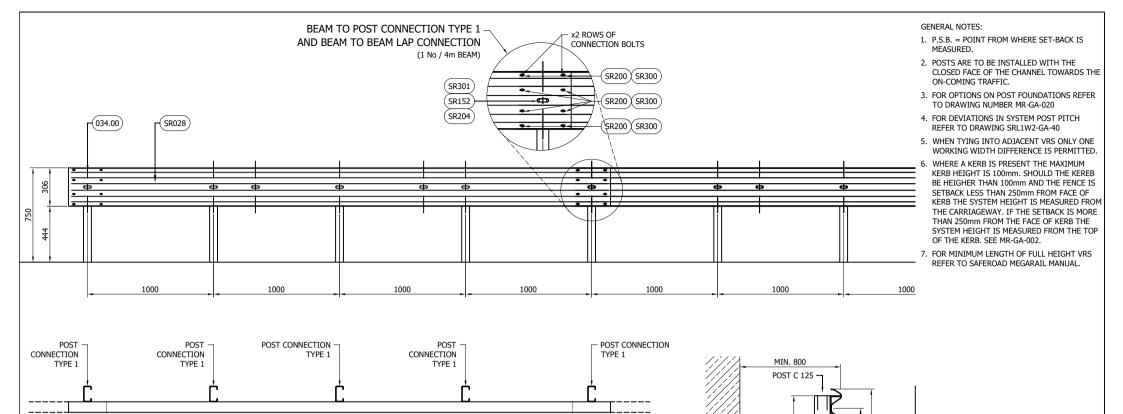
# **SAFEROAD®**

CONCORD HOUSE, BESSEMER WAY, SCUNTHORPE, NORTH LINCOLNSHIRE, DN15 8XE t: 01724 289119 FOR TECHNICAL ASSISTANCE CONTACT

john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

SRL1W2-GA-00



300

BEAM

LAP

0	15/01/20	DRAWING CREATED	M.T
.Vn	DATE	DETAILS	INITIAL

### Super-Rail ES 1.0 L1 W2

VEHICLE RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

### **SAFEROAD**<sup>®</sup>

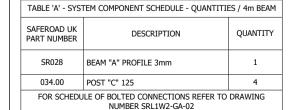
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

SRL1W2-GA-01

00

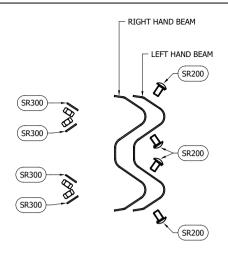


TRAFFIC FLOW -----

300

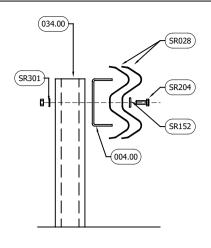
BEAM

LAP



### BEAM TO BEAM CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM				
SAFEROAD UK PART NUMBER	DESCRIPTION	BEAM TO BEAM CONNECTION		
SR200	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)		
SR300	WASHER M16 18Ø HOLE	8 (+8)		



BEAM TO POST CONNECTION TYPE 1

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST			
SAFEROAD UK PART NUMBER	DESCRIPTION	TYPE 1 CONNECTION	
SR204	SETSCREW 4.6 M10 x 45 c/w NUT	1	
SR152	WASHER PLATE 115 x 40 x 5 DIA. 12	1	
SR301	WASHER M10 12Ø HOLE	1	

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

### GENERAL NOTES:

NUMBERS IN THE SCHEDULES SUFFIXED (+)
DENOTES THE ADDITIONAL QUANTITY OF
COMPONENTS REQUIRED FOR EXTREME ENDS
OF INDIVIDUAL RUNS OF BARRIER.

00	15/01/20	DRAWING CREATED	M.T
REVn	DATE	DETAILS	INITIAL

### Super-Rail ES 1.0 L1 W2

VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

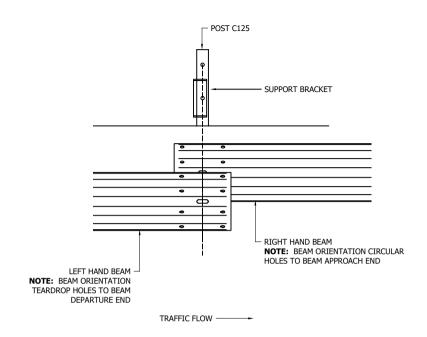
# **SAFEROAD**<sup>®</sup>

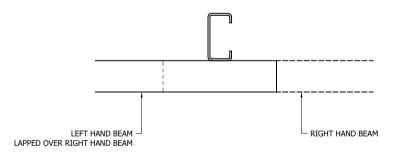
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

SRL1W2-GA-02





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

### GENERAL NOTES:

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

00	15/01/20	DRAWING CREATED	M.T
REVn	DATE	DETAILS	INITIAL

### Super-Rail ES 1.0 L1 W2

VEHICLE RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR L1W2 SUPER-RAIL ES 1.0 SYSTEM

# **SAFEROAD®**

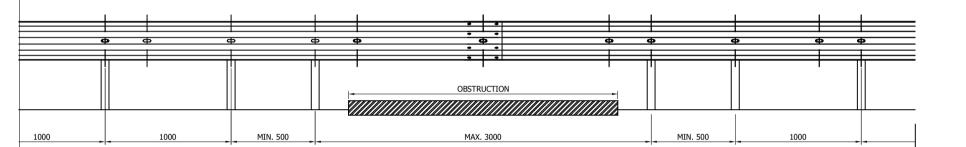
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

SRL1W2-GA-03

- 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. THE NEW POST SPACING MUST NOT EXCEED 3000mm AND MUST NOT BE LESS THAN 500mm. 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 SRN2W2-GA-00 CAN BE USED. INSERT THE ORIGINAL POST SPACING INSTEAD OF 3000mm



00	15/01/20	DRAWING CREATED	M.T
REVn	DATE	DETAILS	INITIAL

### Super-Rail ES 1.0 L1 W2

VEHICLE RESTRAINT SYSTEM DEVIATION SETTING OUT ARRANGEMENT

# **SAFEROAD®**

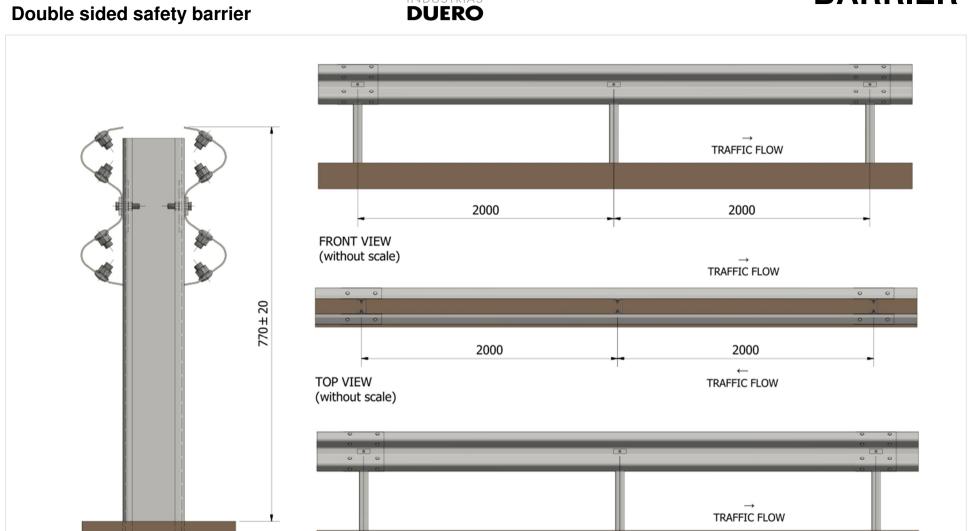
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

SRL1W2-GA-40

# **BARRIER**





BACK VIEW (without scale)

2000



2000



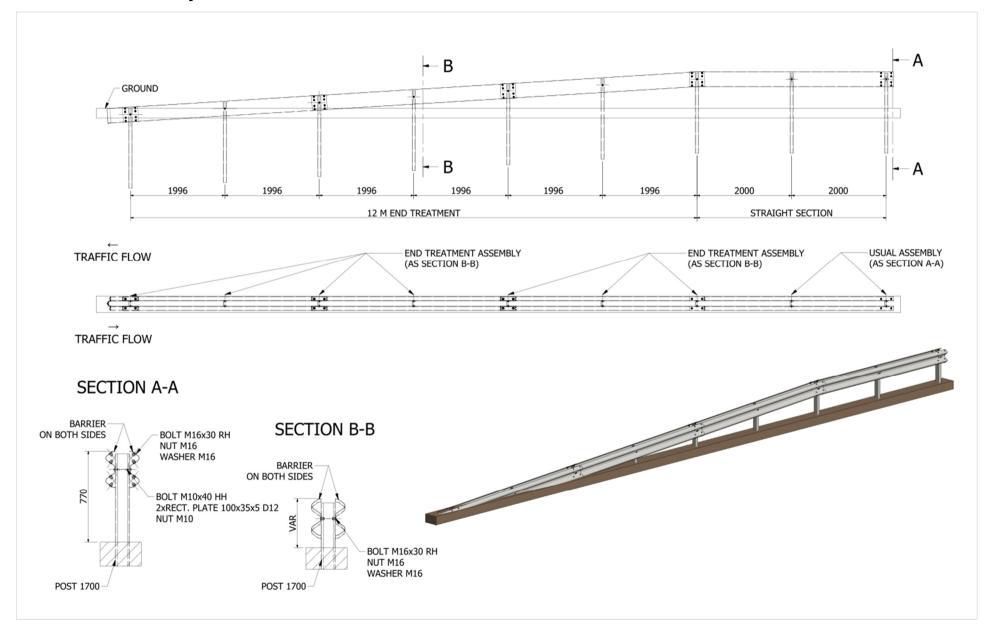


POST 1700

# INDUSTRIAS DUERO

### **Double sided safety barrier**

### 12m END TREATMENT TO GROUND



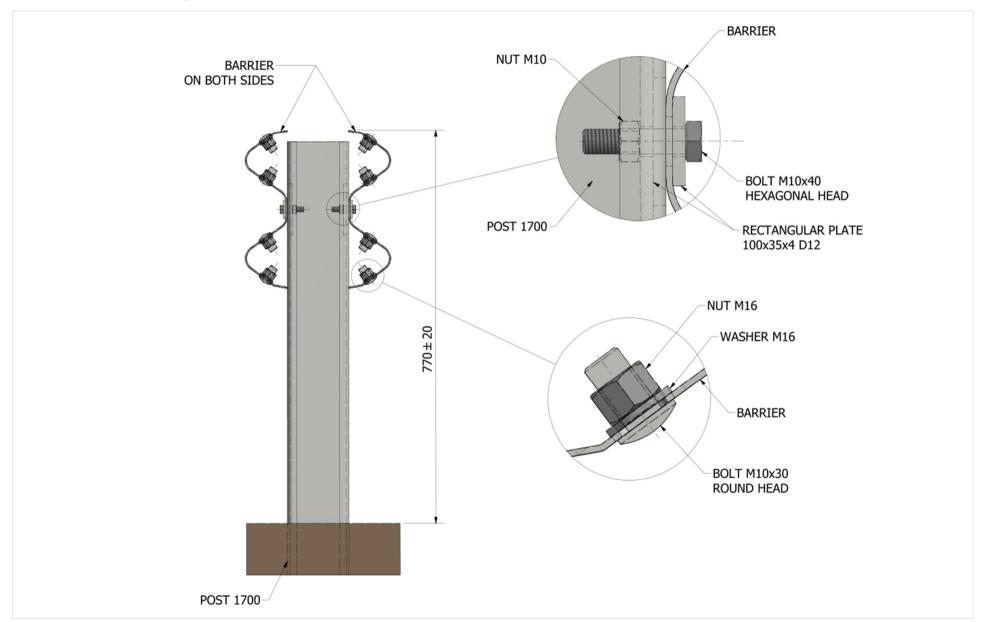




# INDUSTRIAS **DUERO**

# **JOINTS**

### **Double sided safety barrier**



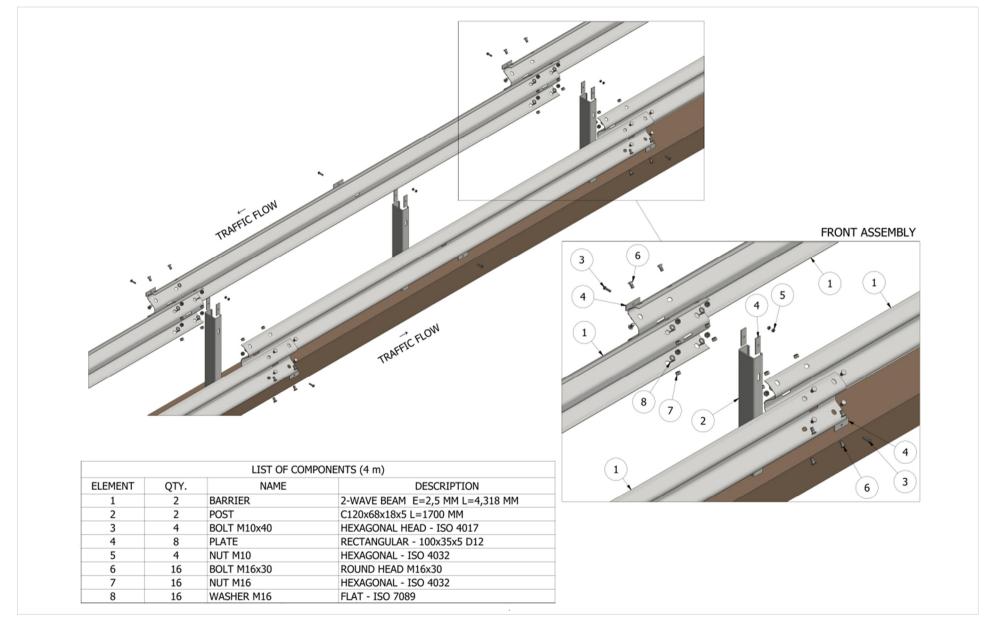




# INDUSTRIAS **DUERO**

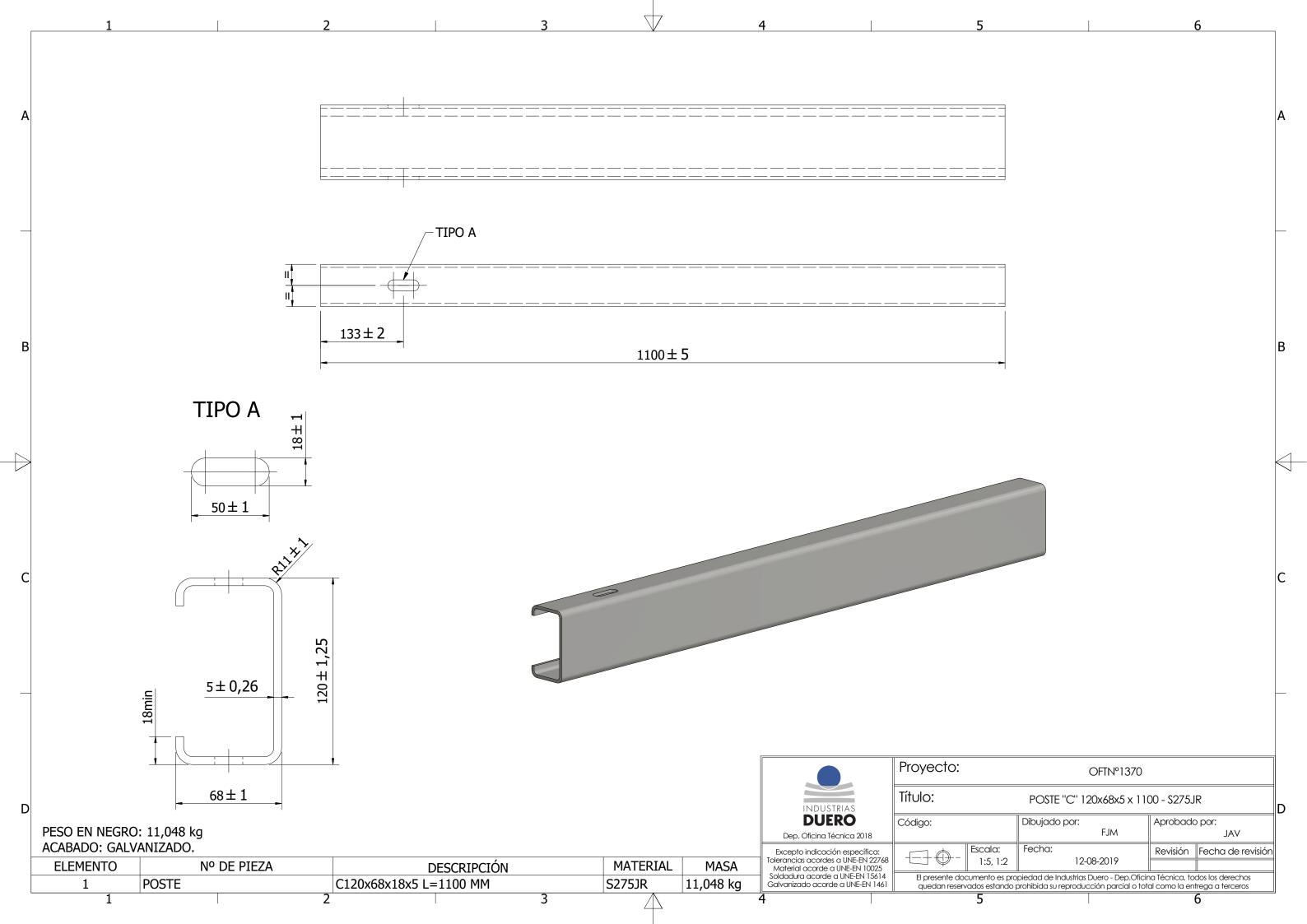
# **ASSEMBLY**

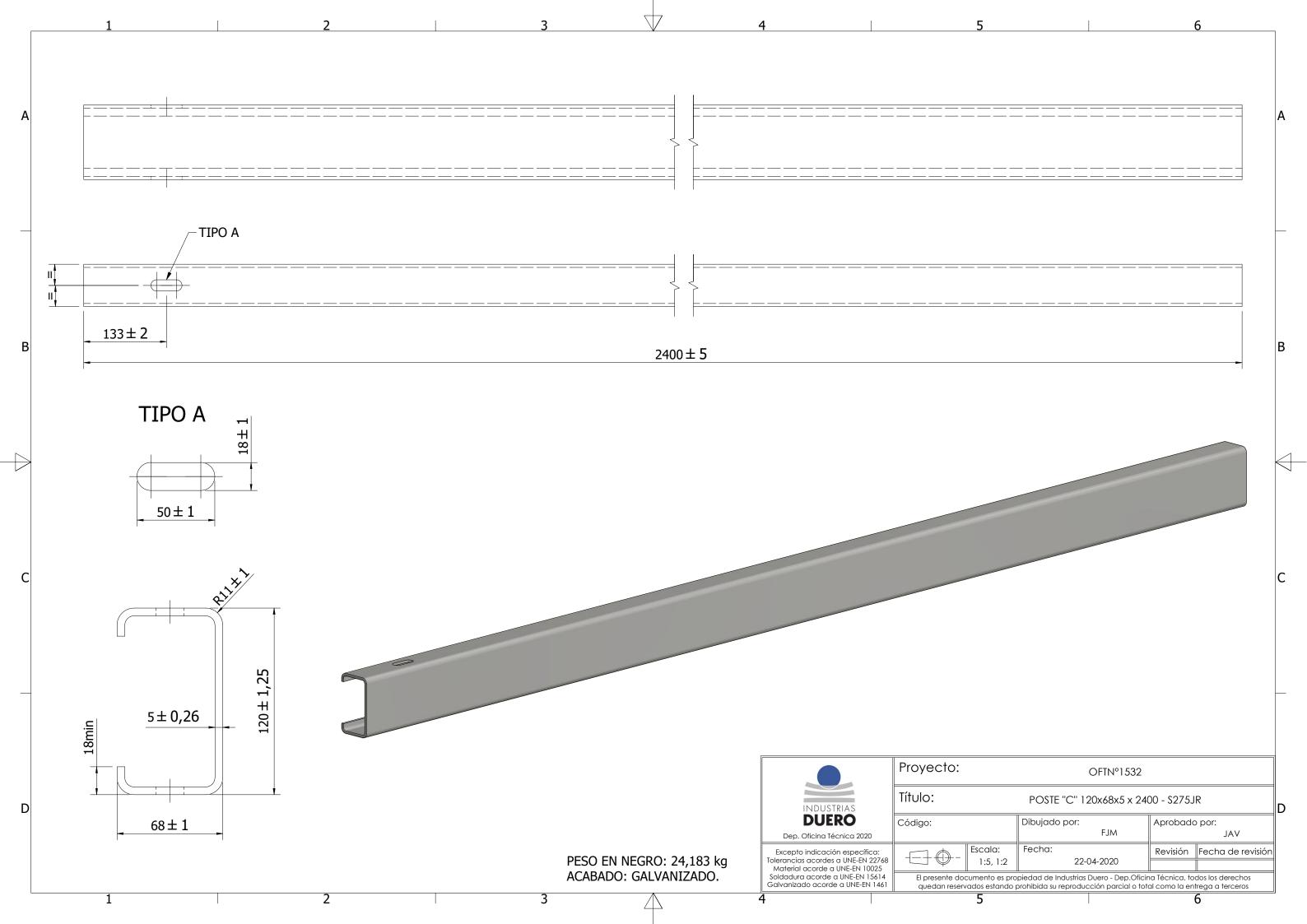
# Double sided safety barrier

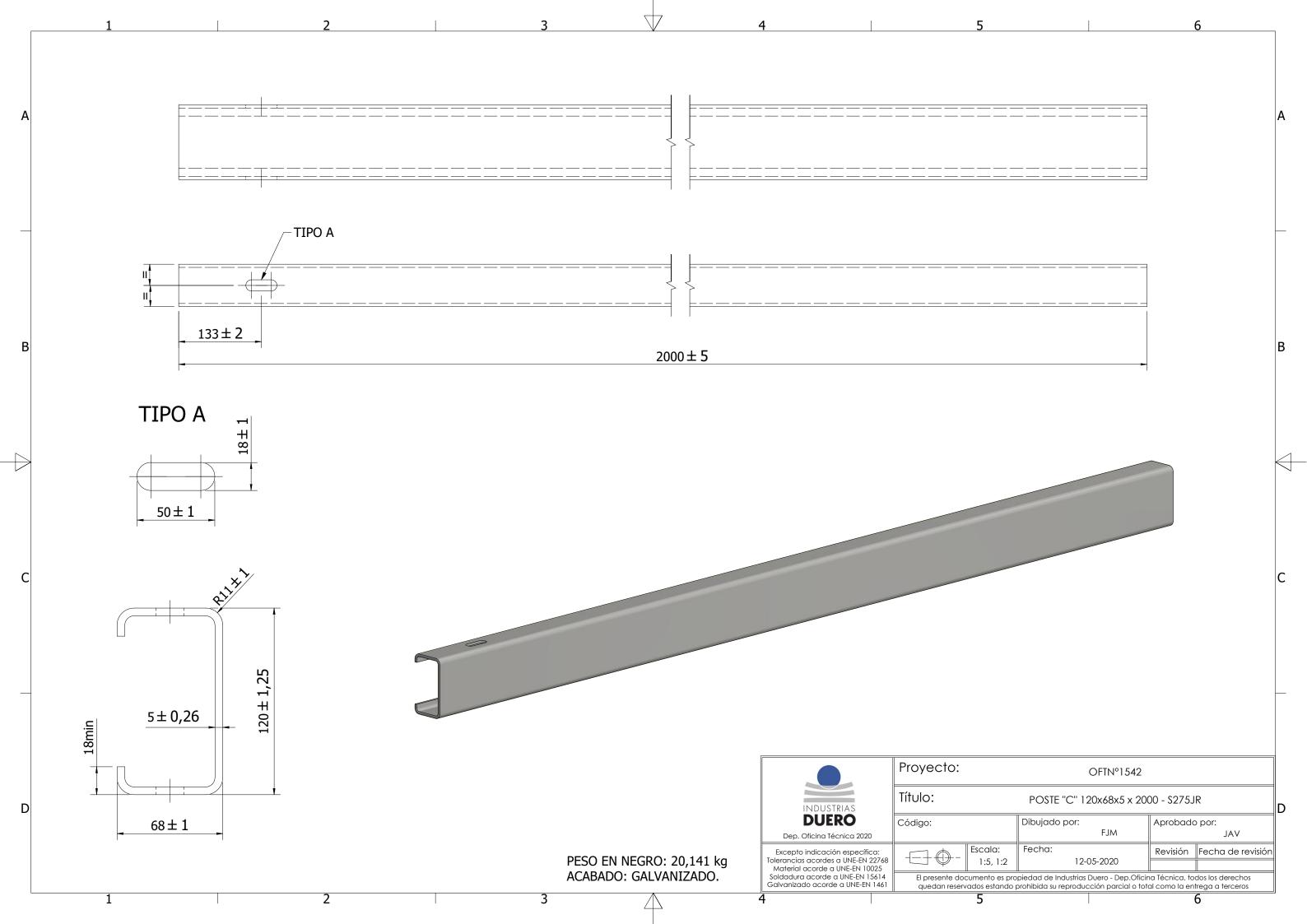












H1 Double Sided Safety Barrier. Installation procedure

#### **INSTALLATION PROCEDURE**

This document describes the procedure to follow for the installation of the H1 double sided safety barrier with posts every 2 metres. The installation consists of the following stages:

- 1. Material distribution and preparation.
- 2. H1 barrier assembly.
- 3. 12 m end terminal assembly.
- 4. Barrier disassembly.

#### 1.- Material distribution and preparation.

- 1. Unload the materials which make up the system longitudinally along the length of the section where it is to be installed
- 2. Post-driving machine guided by barrier elements:
  - a. Place the elements face up and overlapping so that the drill holes of the double wave beams coincide with the edge of the road to be protected and spaced from the post-driving line a minimum of 40 cm and a maximum of 70 cm.
  - b. Align the beams on the ground.

Post-driving machine with automatic guiding system:

Lay out the post-driving line according to the final position of the barrier on the ground plan.

#### 2.- Driving the posts and assembling the components

- 1. Place the guide wheels of the post-driving machine in the previously aligned beams.
- 2. Lay out the post-driving distance as compared to the ground plan position of the barrier on the road: 201 mm from the rear face of the post.
- 3. Drive the C120x68x18x5x1700 mm posts every 2000 ±55 mm at a height of 748 mm measured from the road level.
- 4. Assemble the overlapping of the 2-wave beams nearest to the carriageway. The final position of the beam overlaps will be such that the 2-wave beam seen from the direction of the traffic flow must overlap the one immediately after it and there are no protrusions in the safety barrier.
- 5. Fasten the central mounting hole of the post with an M10x40 5.8 hexagonal head bolt, two 100x35x5 plates (one placed horizontally between the head of the bolt and the beam and the other vertically between the post and the nut), an M10-5 nut at the back tightened to 20±4 Nm torque.



H1 Double Sided Safety Barrier. Installation procedure

- 6. Fasten the overlap (without tightening) using 8 M16x30 8.8 round head bolts and M16-8 nuts + 17x35x4 rear washers. The height of the upper part of the barrier relative to the road level must be 770 ±20 mm.
- 7. Level the beam and tighten the M16x30 8.8 bolts with a torque of 150±10 Nm.
- 8. Assemble the overlapping of the 2-wave beams furthest to the carriageway. The final position of the beam overlaps will be opposite to the one previously installed on the other side.
- 9. Fasten the central mounting hole of the post with an M10x40 5.8 hexagonal head bolt, two 100x35x5 plates (one placed horizontally between the head of the bolt and the beam and the other vertically between the post and the nut), an M10-5 nut at the back tightened to 20±4 Nm torque.
- 10. Fasten the overlap (without tightening) using 8 M16x30 8.8 round head bolts and M16-8 nuts + 17x35x4 rear washers. The height of the upper part of the barrier relative to the road level must be 770 ±20 mm.
- 11. Level the beam and tighten the M16x30 8.8 bolts with a torque of 150±10 Nm.

#### 3.- 12 m end terminal assembly.

- 1. Drive the posts so that the distance between them is 1996 mm in elevation and the height is such that the upper part of the end of the terminal piece is at the road level.
- 2. Install the buffer end piece at the end of the last two parallel beams using 16 M16x30 8.8 round head bolts and M16-8 nuts + 17x35x4 rear washers with a tightening torque of 150±10 Nm.
- 3. Fasten the remaining beams with 8 M16x30 8.8 round head bolts and M16-8 nuts + 17x35x4 rear washers with a tightening torque of 150±10 Nm.
- 4. Excavate the ditch at the end of the section to house the buffer end element and part of the last two parallel beams.
- 5. Place the beams into the ground and fasten them to the posts with M16x30 8.8 round head bolts and M16-8 nut + 17x35x4 rear washer with a tightening torque of 150±10 Nm.

#### 4.- Barrier disassembly

- 1. Remove all the fastening elements of the barrier overlaps (M16X30 8.8).
- 2. Unfasten the bolts and nuts that join the beams to the posts.
- 3. Remove the beams.
- 4. Take the posts out of the ground.



H1 Double Sided Safety Barrier. Installation requirements: Tightening Torques.

#### **TIGHTENING TORQUES**

The following table contains the tightening torques for the various joints of the Double Sided Safety Barrier, indicating the components involved and the type of bolt used for each one:

DESCRIPTION OF THE JOINT	TYPE OF BOLT	TIGHTENING TORQUE (Nm)
2-WAVE BEAM / 2 WAVE BEAM (also in terminals)	Round-head Bolt M16x30-8.8 / C4-00202	150±20
2-WAVE BEAM / BUFFER END	Round-head Bolt M16x30-8.8 / C4-00202	150±20
2-WAVE BEAM / RECTANGULAR PLATE 100x35x5 / POST	Hexagonal-head Bolt M10x40-5.8 UNE-EN ISO 4017	20±4
POST / 2-WAVE BEAM (in terminals)	Round-head Bolt M16x30-8.8 / C4-00202	150±20



BMIDH1C2
H1 Double Sided Safety Barrier. Component Weights.

### **COMPONENT WEIGHTS**

SAFETY BARRIER BMIDH1C2						
CODE	DESCRIPTION	GALVANIZED WEIGHT (kg)				
C4-00192	FLAT WASHER 17X35x4	0,025				
C3-00199	POST C120x68x18x5 L=1700mm	17,85				
C3-00200	2-WAVE BEAM e=2,5mm	41,54				
C4-00201	RECTANGULAR PLATE 100x35x5	0,135				
C4-00202	M16x30 8.8 ROUND HEAD BOLT	0,085				
C4-00213	M10x40 5.8 HEX BOLT	0,03				
C4-00214	M10-5 HEX NUT	0,01				
TC4-00284	BUFFER END	15				
UNE-EN ISO 4034	M16-8 HEX NUT	0,035				



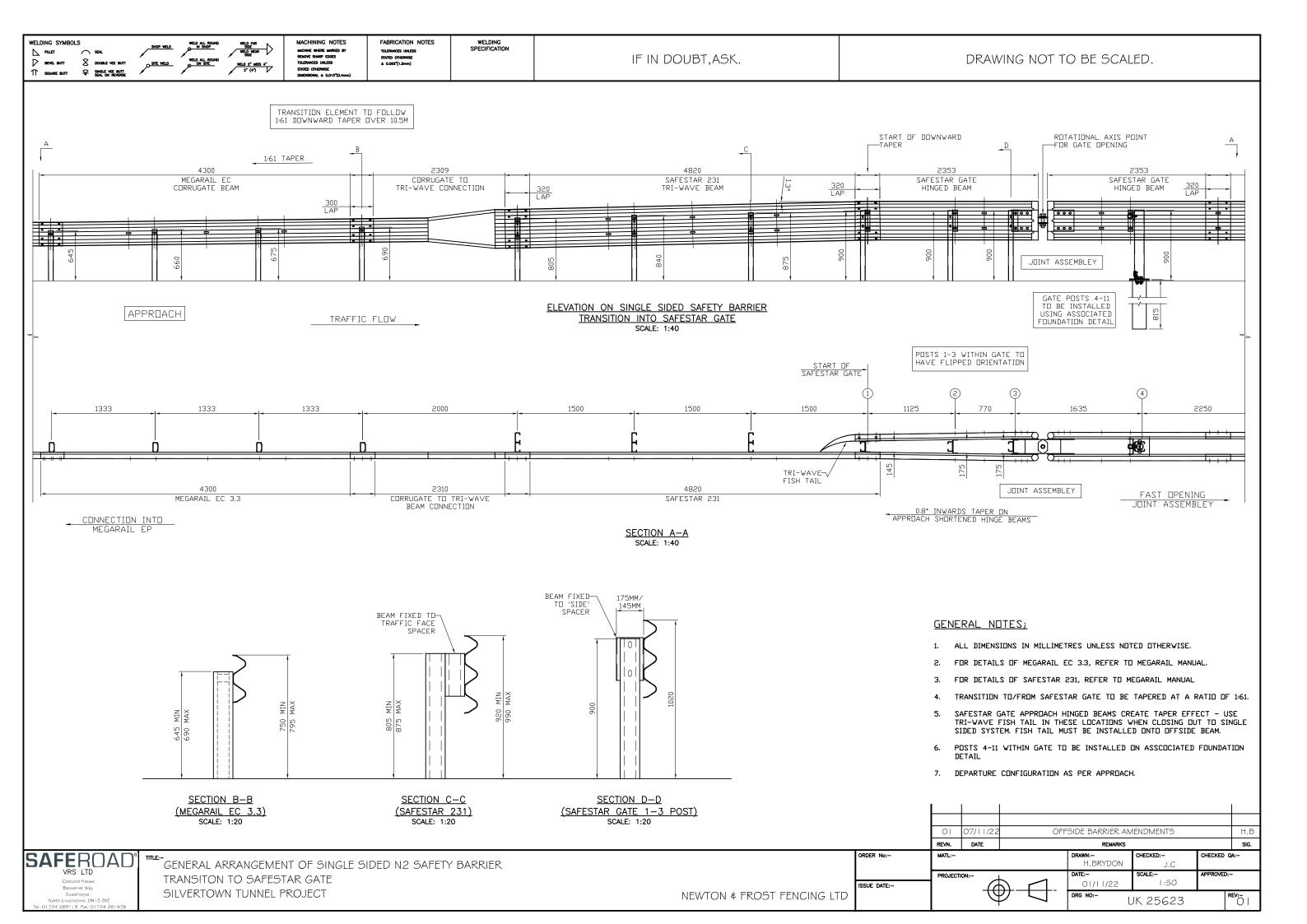
H1 Double Sided Safety Barrier. Coating on system components.

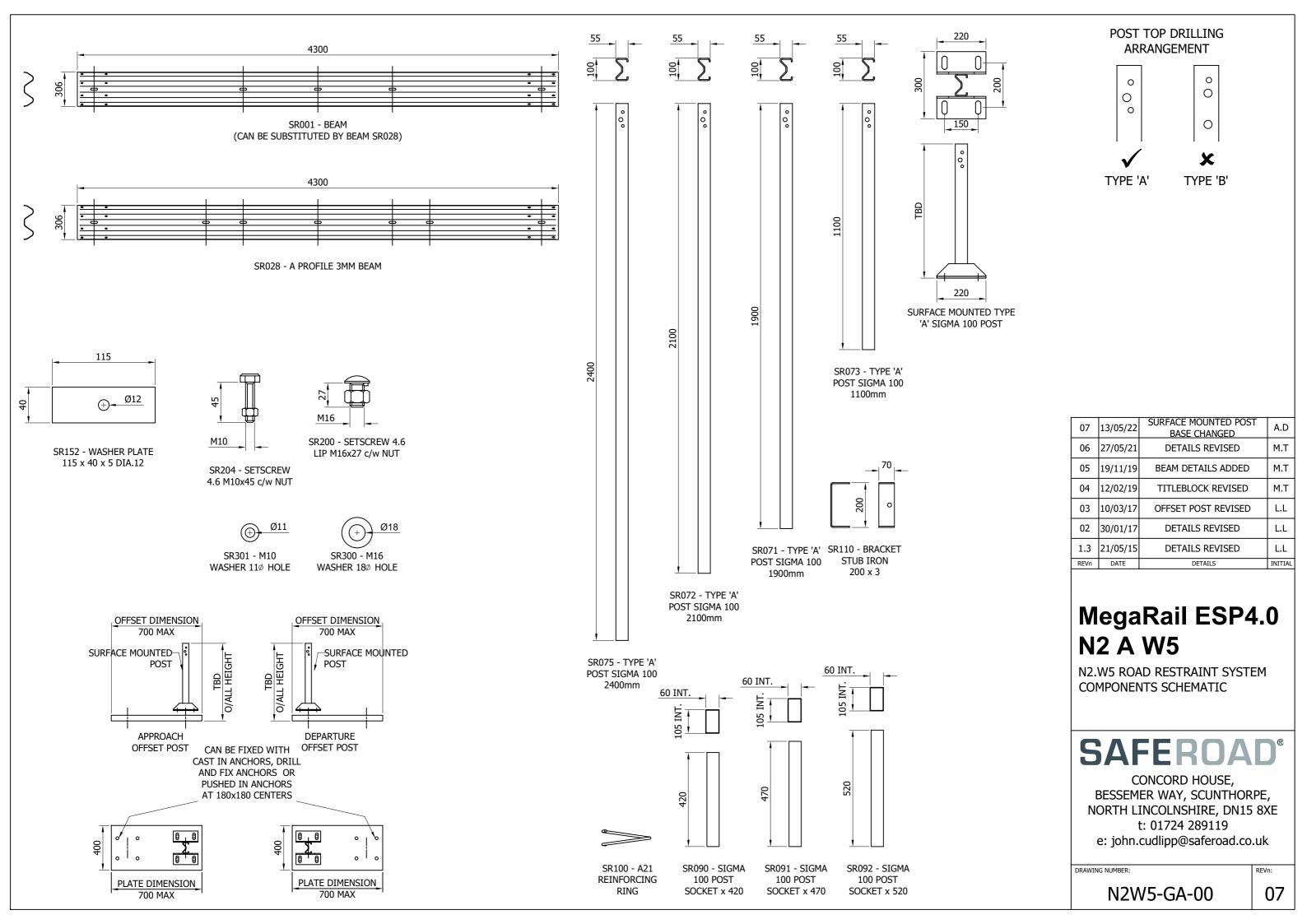
#### **NOTES ON COATINGS**

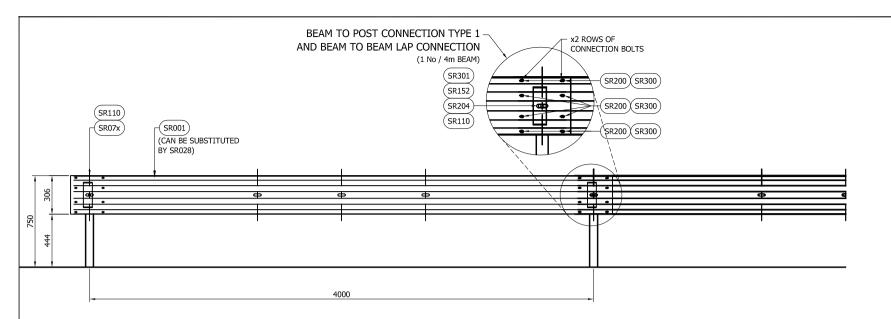
The various components that make up the H1 Double Sided Safety Barrier presented in this document are hot-dip galvanized in compliance with EN ISO 1461.

The system fastening elements are hot-dip galvanized in compliance with EN ISO 10684.

The component referred to as the 100x35x5 rectangular plate has a galvanization coating thickness in compliance with EN ISO 1461 for a centrifuged sample.

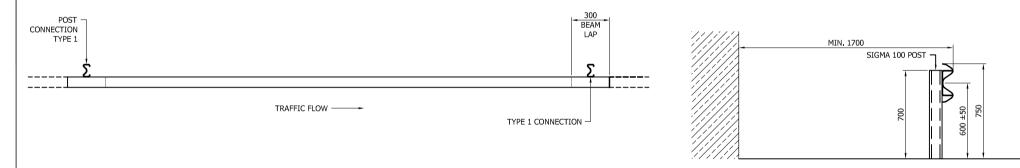






#### GENERAL NOTES:

- P.S.B. = POINT FROM WHERE SET-BACK IS MEASURED.
- POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
- 3. FOR OPTIONS ON POST FOUNDATIONS REFER TO DRAWING NUMBER MR-GA-020
- 4. FOR DEVIATIONS IN SYSTEM POST PITCH REFER TO DRAWING N2W5-GA-40
- 5. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
- WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 100mm.
- 7. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.



#### SYSTEM COMPONENT SCHEDULE - QUANTITIES / 4m BEAM SAFEROAD UK PART DESCRIPTION QUANTITY NUMBER BEAM "A" PROFILE (CAN BE SR001 SUBSTITUTED BY SR028) SR110 BRACKET STUB IRON 200 x 3 1 POST SIGMA 100 1 FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER N2W5-GA-02

TABLE 'B' - SCHEDULE OF POST REFERENCE NUMBERS AND LENGTHS						
SAFEROAD UK PART NUMBER	POST LENGTH					
SR073	1100					
SR071	1900					
SR072	2100					
SR075	2400					

				ı
				l
04	19/11/19	BEAM DETAILS ADDED	м.т	l
03	12/02/19	TITLEBLOCK REVISED	M,T	l
02	30/01/17	DETAILS REVISED	L.L	
1.3	21/05/15	DETAILS REVISED	L.L	l
REVn	DATE	DETAILS	INITIAL	L

## MegaRail ESP4.0 N2 A W5

N2.W5 VEHICLE RESTRAINT SYSTEM ASSEMBLY AND SETTING OUT ARRANGEMENT

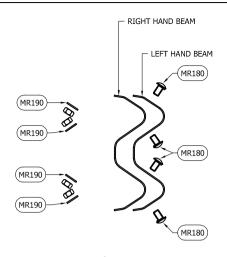
## **SAFEROAD®**

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

DRAWING NUMBER:

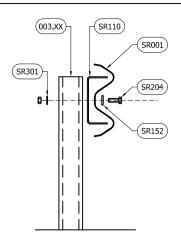
N2W5-GA-01

04



#### BEAM TO BEAM LAP CONNECTION ARRANGEMENT (x2 LOCATIONS / BEAM END)

BOLTING COMPONENT SCHEDULE - QUANTITIES / BEAM								
SAFEROAD UK PART NUMBER	UK PART DESCRIPTION							
SR200	SETSCREW 4.6 LIP M16x27 c/w NUT	8 (+8)						
SR300	WASHER M16 18¢ HOLE	8 (+8)						



BEAM TO POST CONNECTION TYPE 1

BOLTING COMPONENT SCHEDULE - QUANTITIES / POST						
SAFEROAD UK PART NUMBER	JK PART DESCRIPTION					
SR204	SETSCREW 4.6 M10x45 c/w NUT	1				
SR152	WASHER PLATE 115 x 40 x 5 DIA. 12	1				
SR301	WASHER M10 11¢ HOLE	1				
QUANTITY OF CONNECTION TYPES / 4m BEAM						
		1 (+1)				

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

#### GENERAL NOTES:

NUMBERS IN THE SCHEDULES SUFFIXED (+)
 DENOTES THE ADDITIONAL QUANTITY OF
 COMPONENTS REQUIRED FOR EXTREME ENDS
 OF INDIVIDUAL RUNS OF BARRIER,

03	12.02.19	DETAILS REVISED	м.т
02	30/01/17	DETAILS REVISED	L,L
1.3	21/05/15	DETAILS REVISED	L,L
REVn	DATE	DETAILS	INITIAL

## MegaRail ESP4.0 N2 A W5

N2.W5 VEHICLE RESTRAINT SYSTEM BOLTING ARRANGEMENTS

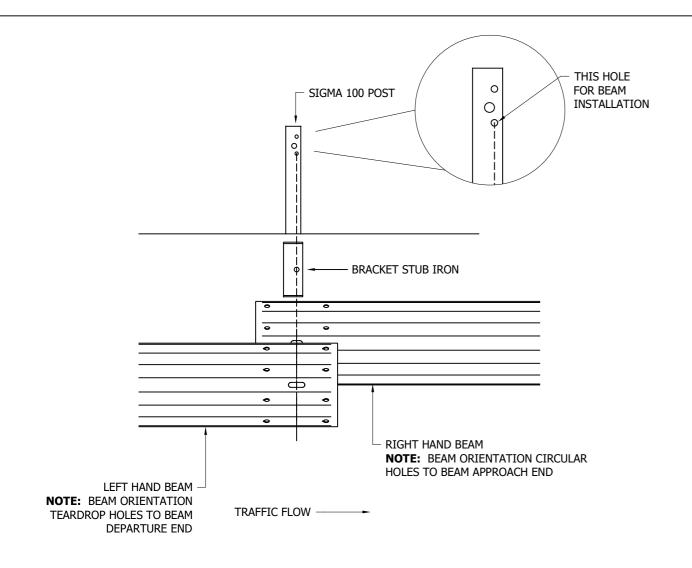
# **SAFEROAD®**

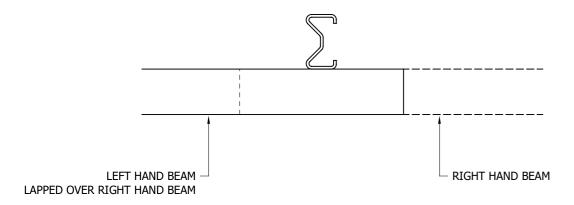
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
e: john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

REVn:

N2W5-GA-02





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

#### **GENERAL NOTES:**

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

04	17.12.21	DETAILS REVISED	A.D
03	12.02.19	DETAILS REVISED	м.т
02	30/01/17	DETAILS REVISED	L.L
1.3	21/05/15	DETAILS REVISED	L.L
REVn	DATE	DETAILS	INITIAL

# MegaRail ESP4.0 N2 A W5

N2.W5 VEHICLE RESTRAINT SYSTEM. BEAM LAPPING DETAIL FOR W5 MEGARAIL SYSTEM

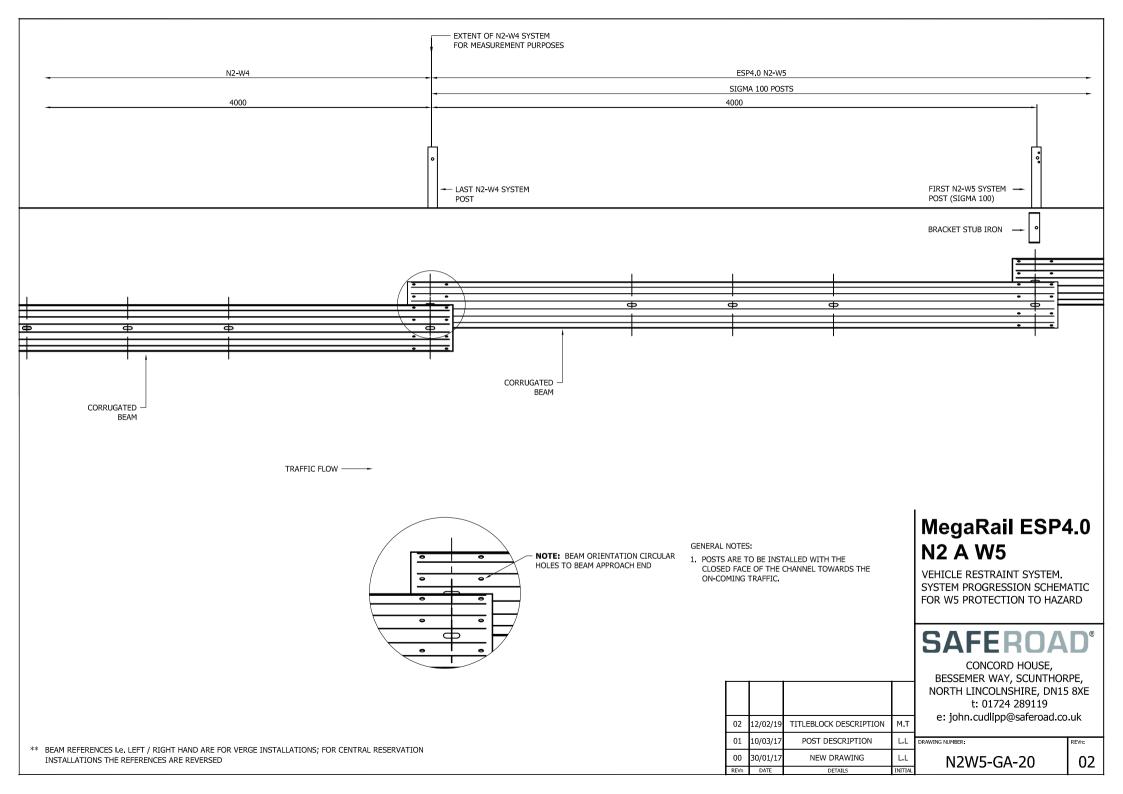
# **SAFEROAD®**

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NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
e: john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

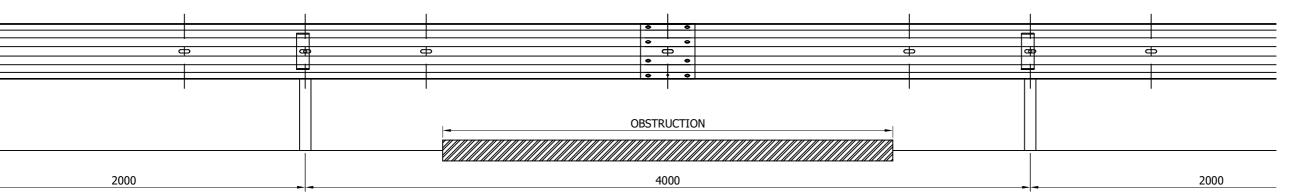
REVn:

N2W5-GA-03



#### 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 N2W5-GA-00 CAN BE USED.



OBSTRUCTION

PUSHED IN

CRADLE ANCHOR

		Ш	I	I	I		П	l	MegaRail ESP4.0			
		<del>*</del> •				-			$\Longrightarrow$ MagaPail EQD $I$ $\cap$			N
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	•	-				•						
		1	1	1	1		¦ .	ı	REVn	DATE	DETAILS	INITIAL
									00	30/01/17	NEW DRAWING	L.L
		- -		400	00		- -		01	12/02/19	TITLEBLOCK REVISED	M.T
									02	25/05/21	DETAILS REVISED	M.T
									03	23/07/21	SURFACE MOUNTED POST DETAIL ADDED	A.D
									04	13/05/22	SURFACE MOUNTED POST BASE CHANGED	A.D

# **N2 A W5**

N2.W5 VEHICLE RESTRAINT SYSTEM **DEVIATION SETTING OUT ARRANGEMENT** 

# **SAFEROAD®**

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e: john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

DRILL & FIX

OR PUSHED IN **ANCHOR** 

N2W5-GA-40

04

REVn: