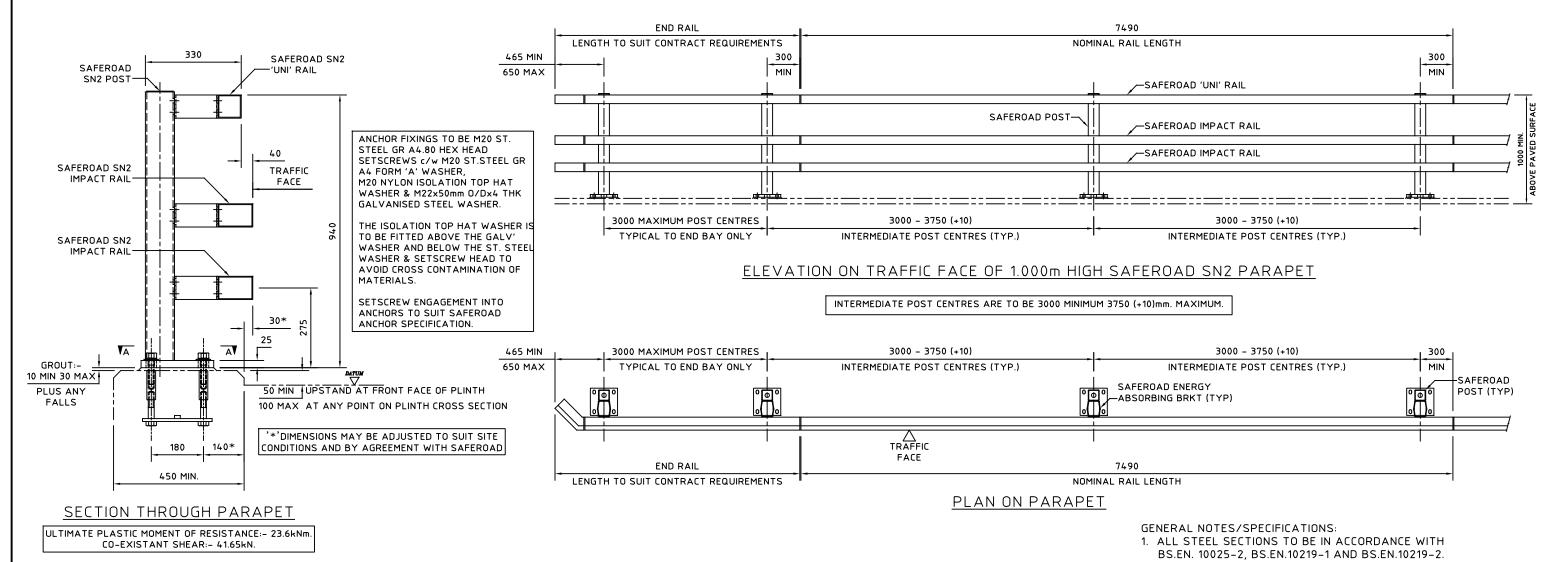
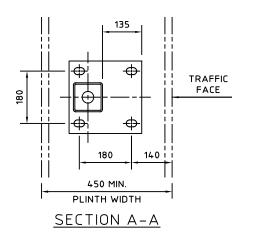
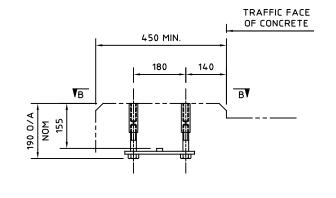
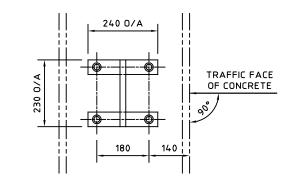
### DRAWING NOT TO BE SCALED.







SECTION THROUGH UPSTAND



<u>SECTION B-B</u> PLAN VIEW ON UPSTANI

#### ANCHOR CRADLE DETAIL

CAST-IN ANCHOR CRADLE MAY BE REPLACED WITH SAFEROAD DRILLPUT CHEMICAL ANCHORS OF REQUIRED SIZE & LOAD CAPACITY DETERMINED BY SITE CONDITIONS. EXISTING ANCHORS – IF PRESENT – ARE TO BE TESTED PRIOR FITTING OF PARAPET POSTS AND REPLACED IF UNSUITABLE.

- 2. ALL MATERIAL TO BE GALVANISED TO BS.EN.ISO 1461:2009
- 3. HOLDING DOWN SETSCREWS TO BE TO BS.3692 AND BE ST.STEEL TO BS.EN.ISO 3506-1 GRADE A4 CLASS 80. ALL OTHER BOLTS/SETSCREWS TO BE GALVANISED STEEL TO CONFORM TO BS.3692 & BS.EN.ISO 4014 GRADE 8.8.
- 4. ALL NUTS TO BE GALVANISED STEEL TO CONFORM TO BS.3692 AND BS.EN.ISO 4032 GRADE 8.
- 5. GALVANISED PLAIN WASHERS TO CONFORM TO BS.4320.
- 6. SPRING WASHERS TO CONFORM TO BS.4464.
- 7. STAINLESS STEEL WASHERS TO BE GRADE A4.
- 8. PARAPET PERFORMANCE IS TO BS.EN.1317-1 & BS.EN.1317-2. IMPACT TEST CRITERIA:- TB11 & TB32. CONTAINMENT LEVEL:- N2.

WORKING WIDTH:- W4 (1.3m).
IMPACT SEVERITY LEVEL:- B

- 9. POSTS TO BE VERTICAL TO WITHIN ±15mm OVER 1000mm.
- 10. RAILS TO BE SET IN A FLOWING LINE AT A MINIMUM HEIGHT OF 1000mm ABOVE THE ADJOINING ROAD/PATH SURFACE.
- 11. FOR MATERIAL WEIGHTS REFER TO COMPONENT DRAWINGS.

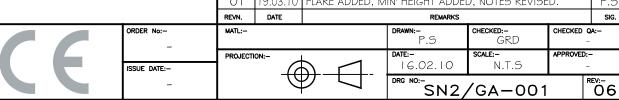
| REVN. | DATE     | REMARKS  | SIG. |
|-------|----------|--|------|
| 0     | 19.03.10 | FLARE ADDED, MIN' HEIGHT ADDED, NOTES REVISED. | P.S  |
| 02    | 23.03.10 | MINOR REVISIONS                                | P.S  |
| 03    | 21.04.10 | MINOR REVISIONS                                | P.S  |
| 04    | 12.08.10 | NOTES REVISED                                  | P.S  |
| 05    | 15.01.13 | CHANGED TO SAFEROAD UK \$ CE LOGO ADDED        | JA   |
| 06    | 20.10.17 | POST CENTRES REVISED TO LATEST TEST DETAILS    | М.Т  |
|       |          |  |      |

SAFERUAL)

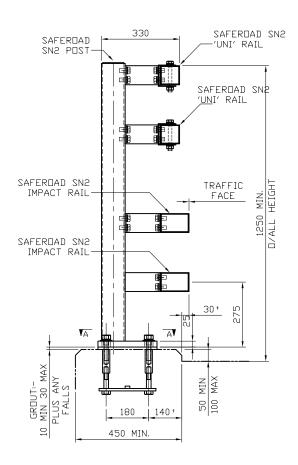
VRS LTD

Concord House,
Bessemer Way,
Scunthorpe,
North Lincolnshire, DNI5 8XE
Tel: 01724 289119 Fax: 01724 281478

GENERAL ARRANGEMENT OF SAFEROAD SN2 - N2 VEHICLE PARAPET (I | Okm/h TRAFFIC SPEED) TO BS.EN. | 3 | 7- | \$ 2. 3 RAIL SYSTEM - | I.OOOm NOMINAL HEIGHT



### DRAWING NOT TO BE SCALED.



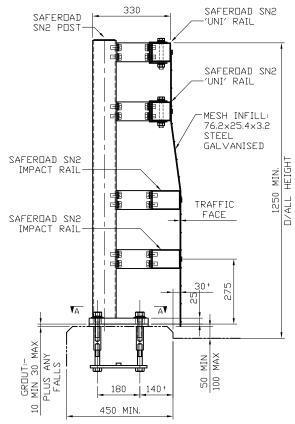
SECTION THROUGH PARAPET

SN2/1.25/O

SCALE 1:16

**BASEPLATE DETAIL** 

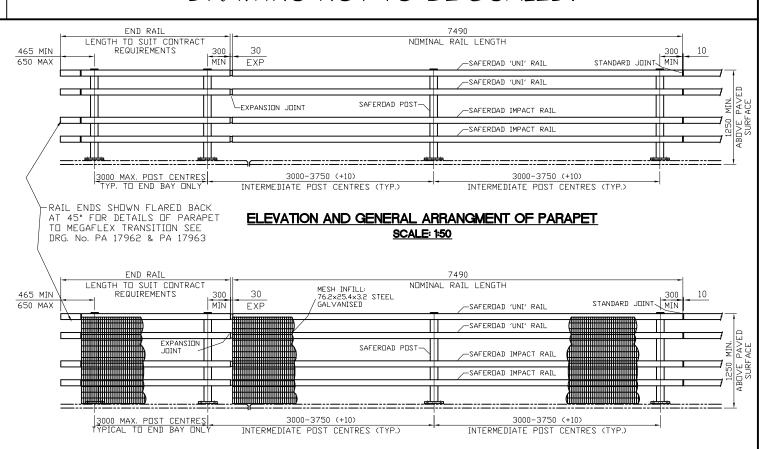
SCALE: 1:10



**SCALE 1:16** 

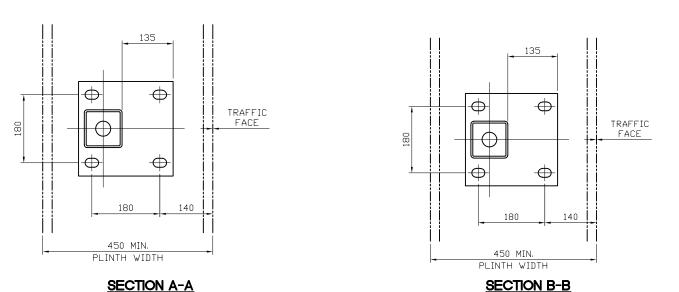
**BASEPLATE DETAIL** 

SCALE: 1:10

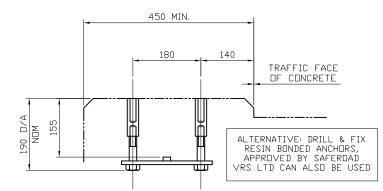


### **SECTION THROUGH PARAPET** WITH MESH INFILL - SN2/1.25/M

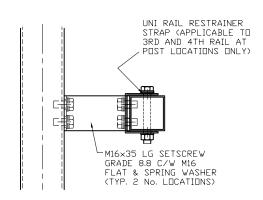
## ELEVATION AND GENERAL ARRANGMENT OF PARAPET WITH MESH INFILL



\* DIMENSIONS MAY BE ADJUSTED TO SUIT SITE



### CAST IN CRADLE DETAIL SCALE: 1:10



#### RAIL TO POST FIXING DETAIL SCALE: 1:5

|                         |             | PARAPET PERFORMANCE   |             |  |
|-------------------------|-------------|-----------------------|-------------|--|
|                         |             | IMPACT TEST CRITERIA  | TB11 & TB32 |  |
| UNFACTORED POST B       | ASE LOADS   | CONTAINMENT LEVEL     | N2          |  |
| ULTIMATE PLASTIC MOMENT | 23.6 kNm    | WORKING WIDTH         | W4 (1.3m)   |  |
| OF RESISTANCE OF POST   | 20.0 1.1111 | IMPACT SEVERITY LEVEL | В           |  |
| CO-EXISTANT SHEAR       | 41.65 kN    | DYNAMIC DEFLECTION    | 0.7m        |  |

#### GENERAL NOTES

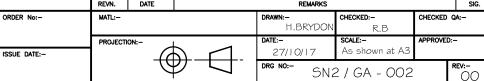
- ALL STEEL SECTIONS TO BE IN ACCORDANCE WITH
- BS.EN. 10025-2, BS.EN.10219-1 AND BS.EN.10219-2.
  ALL MATERIAL TO BE GALVANISED TO BS.EN.ISO 1461:2009
- HOLDING DOWN SETSCREWS TO BE TO BS.3692 AND BE ST.STEEL TO BS.EN.ISO 3506-1 GRADE A4 CLASS 80.
- ALL OTHER BOLTS/SETSCREWS TO BE GALVANISED STEEL TO CONFORM TO BS.3692 & BS.EN.ISO 4014 GRADE 8.8. ALL NUTS TO BE GALVANISED STEEL TO CONFORM TO
- BS.3692 AND BS.EN.ISO 4032 GRADE 8. GALVANISED PLAIN WASHERS TO CONFORM TO BS.4320.
- SPRING WASHERS TO CONFORM TO BS.4464.
- STAINLESS STEEL WASHERS TO BE GRADE A4.
- PARAPET PERFORMANCE IS TO BS.EN.1317-1 & BS.EN.1317-2.
- POSTS TO BE VERTICAL TO WITHIN ±15mm OVER 1000mm. 10. RAILS TO BE SET IN A FLOWING LINE AT A MINIMUM HEIGHT
- OF 1000mm ABOVE THE ADJOINING ROAD/PATH SURFACE.
- 11. FOR MATERIAL WEIGHTS REFER TO COMPONENT DRAWINGS.

#### REVN. DATE REMARKS SIG.

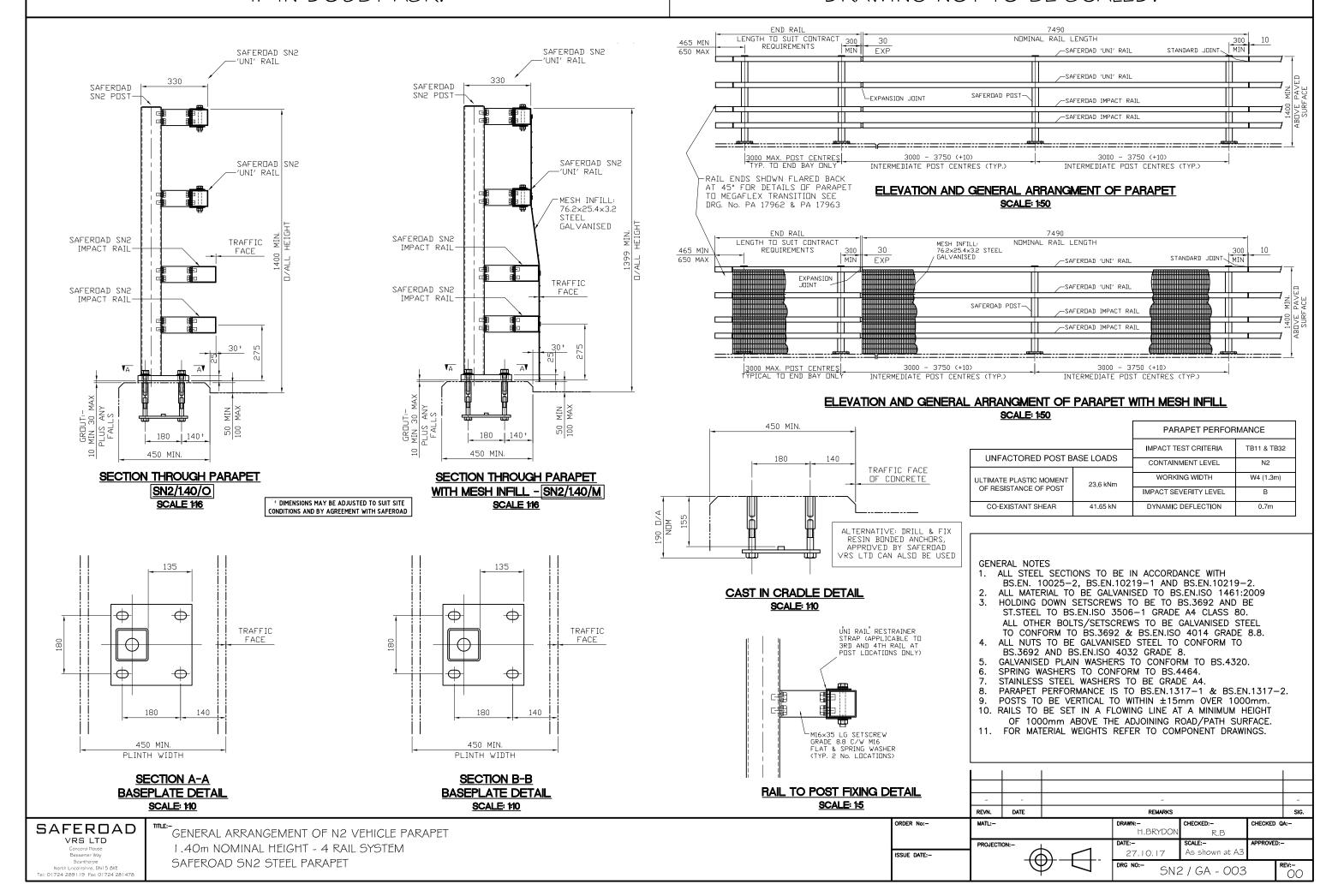
#### SAFERDAD VRS LTD

North Lincolnshire, DN15 8XE Tel: 01724 289119 Fax: 01724 281478

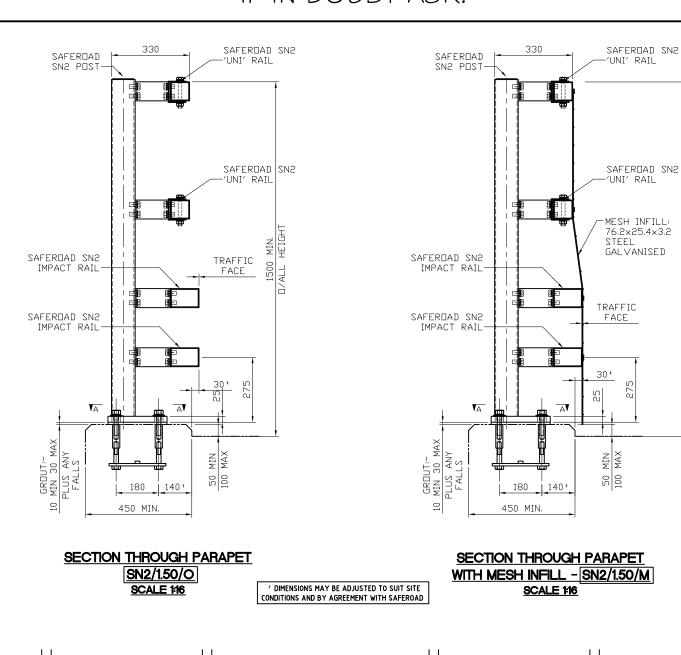
GENERAL ARRANGEMENT OF N2 VEHICLE PARAPET 1.25m NOMINAL HEIGHT - 4 RAIL SYSTEM SAFEROAD SN2 STEEL PARAPET

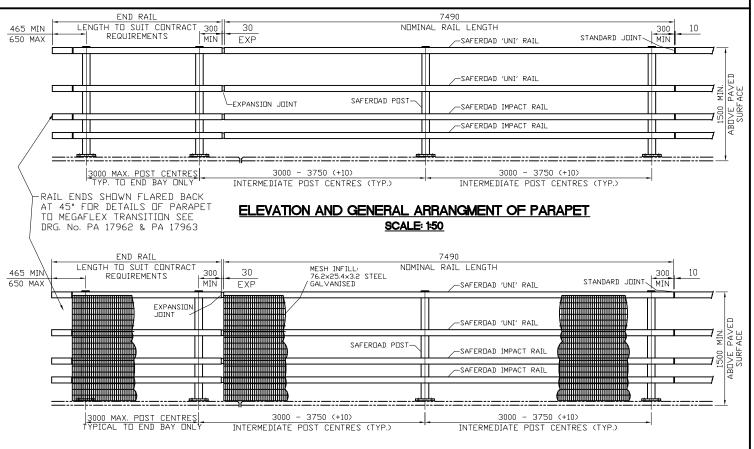


### DRAWING NOT TO BE SCALED.



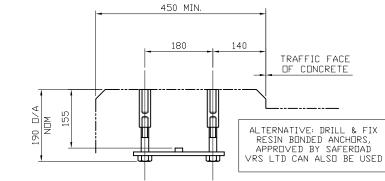
### DRAWING NOT TO BE SCALED.





#### ELEVATION AND GENERAL ARRANGMENT OF PARAPET WITH MESH INFILL **SCALE: 1:50**

GENERAL NOTES



|                            |          | PARAPET PERFORMANCE   |             |  |
|----------------------------|----------|-----------------------|-------------|--|
|                            | 40510450 | IMPACT TEST CRITERIA  | TB11 & TB32 |  |
| UNFACTORED POST BASE LOADS |          | CONTAINMENT LEVEL     | N2          |  |
| ULTIMATE PLASTIC MOMENT    | 23.6 kNm | WORKING WIDTH         | W4 (1.3m)   |  |
| OF RESISTANCE OF POST      |          | IMPACT SEVERITY LEVEL | В           |  |
| CO-EXISTANT SHEAR          | 41.65 kN | DYNAMIC DEFLECTION    | 0.7m        |  |

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TRAFFIC FACE Ф  $\oplus$ 450 MIN.

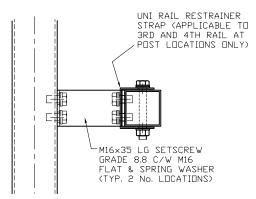
PLINTH WIDTH

**SECTION B-B** 

BASEPLATE DETAIL

SCALE: 1:10

#### CAST IN CRADLE DETAIL SCALE: 1:10



#### ALL OTHER BOLTS/SETSCREWS TO BE GALVANISED STEEL TO CONFORM TO BS.3692 & BS.EN.ISO 4014 GRADE 8.8. ALL NUTS TO BE GALVANISED STEEL TO CONFORM TO

ALL STEEL SECTIONS TO BE IN ACCORDANCE WITH

- BS.3692 AND BS.EN.ISO 4032 GRADE 8. GALVANISED PLAIN WASHERS TO CONFORM TO BS.4320.
- SPRING WASHERS TO CONFORM TO BS.4464.
- STAINLESS STEEL WASHERS TO BE GRADE A4. PARAPET PERFORMANCE IS TO BS.EN.1317-1 & BS.EN.1317-2.
- POSTS TO BE VERTICAL TO WITHIN ±15mm OVER 1000mm.

ALL STEEL SECTIONS TO BE IN ACCORDANCE WITH BS.EN. 10025-2, BS.EN.10219-1 AND BS.EN.10219-2. ALL MATERIAL TO BE GALVANISED TO BS.EN.ISO 1461:2009 HOLDING DOWN SETSCREWS TO BE TO BS.3692 AND BE ST.STEEL TO BS.EN.ISO 3506-1 GRADE A4 CLASS 80.

- 10. RAILS TO BE SET IN A FLOWING LINE AT A MINIMUM HEIGHT
- OF 1000mm ABOVE THE ADJOINING ROAD/PATH SURFACE. 11. FOR MATERIAL WEIGHTS REFER TO COMPONENT DRAWINGS.

#### RAIL TO POST FIXING DETAIL SCALE: 1:5

#### **BASEPLATE DETAIL** SCALE: 1:10 SAFERDAD

450 MIN

PLINTH WIDTH

SECTION A-A

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135

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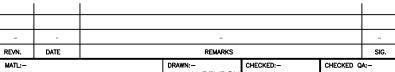
140

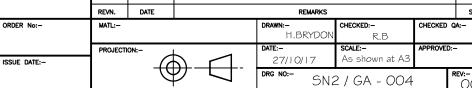
TRAFFIC

FACE

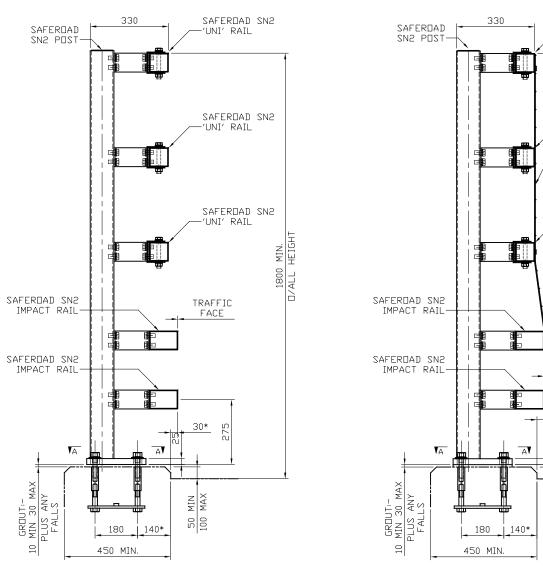
VRS LTD North Lincolnshire, DN15 8XE Tel: 01724 289119 Fax: 01724 281478

GENERAL ARRANGEMENT OF N2 VEHICLE PARAPET 1.50m NOMINAL HEIGHT - 4 RAIL SYSTEM SAFEROAD SN2 STEEL PARAPET





## DRAWING NOT TO BE SCALED.



76.2×25.4×3.2 GALVANISED SAFERDAD SN2 'UNI' RAIL TRAFFIC FACE 30\* W W 100

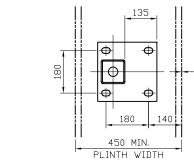
SAFEROAD SN2 -'UNI' RAIL

SAFERDAD SN2

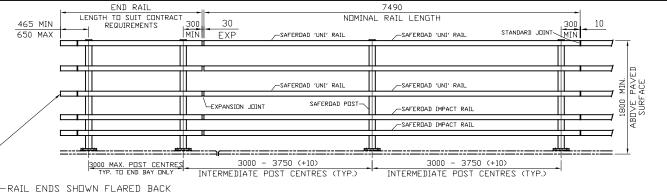
'UNI' RAIL MESH INFILL:

SECTION THROUGH PARAPET WITH MESH INFILL - SN2/1.80/M SCALE 1:16

\*\* DIMENSIONS MAY BE ADJUSTED TO SUIT SITE CONDITIONS AND BY AGREEMENT WITH SAFEROAD

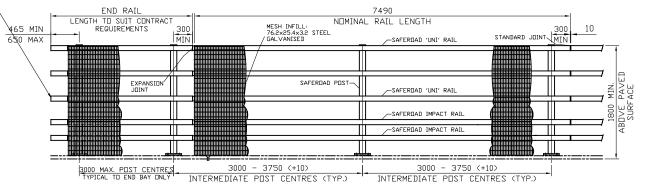


SECTION B-B BASEPLATE DETAIL SCALE: 1:10

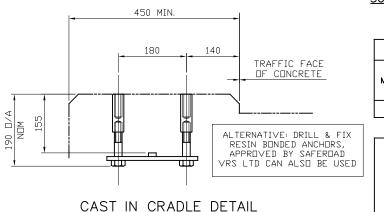


RAIL ENDS SHOWN FLARED BACK
AT 45° FOR DETAILS OF PARAPET
TO MEGAFLEX TRANSITION SEE

ELEVATION AND GENERAL ARRANGMENT OF PARAPET
TO MEGAFLEX TRANSITION SEE SCALE: 1:60 DRG. No. PA 17962 & PA 17963

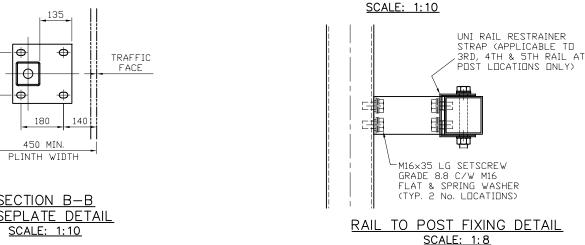


#### ELEVATION AND GENERAL ARRANGMENT OF PARAPET WITH MESH INFILL SCALE: 1:60



PARAPET PERFORMANCE IMPACT TEST CRITERIA TB11 & TB32 UNFACTORED POST BASE LOADS CONTAINMENT LEVEL N2 ULTIMATE PLASTIC WORKING WIDTH W4 (1.3m) MOMENT OF RESISTANCE OF POST IMPACT SEVERITY LEVEL В CO-EXISTANT SHEAR 41.65 kN DYNAMIC DEFLECTION 0.7m

- ALL STEEL SECTIONS TO BE IN ACCORDANCE WITH BS.EN. 10025-2, BS.EN.10219-1 AND BS.EN.10219-2. ALL MATERIAL TO BE GALVANISED TO BS.EN.ISO 1461:2009
- HOLDING DOWN SETSCREWS TO BE TO BS.3692 AND BE ST.STEEL TO BS.EN.ISO 3506-1 GRADE A4 CLASS 80. ALL OTHER BOLTS/SETSCREWS TO BE GALVANISED STEEL
- TO CONFORM TO BS.3692 & BS.EN.ISO 4014 GRADE 8.8. ALL NUTS TO BE GALVANISED STEEL TO CONFORM TO
- BS.3692 AND BS.EN.ISO 4032 GRADE 8.
  GALVANISED PLAIN WASHERS TO CONFORM TO BS.4320.
- SPRING WASHERS TO CONFORM TO BS.4464.
  STAINLESS STEEL WASHERS TO BE GRADE A4.
- PARAPET PERFORMANCE IS TO BS.EN.1317-1 & BS.EN.1317-2.
- POSTS TO BE VERTICAL TO WITHIN ±15mm OVER 1000mm. RAILS TO BE SET IN A FLOWING LINE AT A MINIMUM HEIGHT
- OF 1000mm ABOVE THE ADJOINING ROAD/PATH SURFACE.
- FOR MATERIAL WEIGHTS REFER TO COMPONENT DRAWINGS.



SAFEROAD VRS LTD

SECTION THROUGH PARAPET

SN2/1.80

SCALE 1:16

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450 MIN

PLINTH WIDTH

SECTION A-A BASEPLATE DETAIL

SCALE: 1:10

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TRAFFIC

GENERAL ARRANGEMENT OF N2 VEHICLE PARAPET 1.80m NOMINAL HEIGHT - 5 RAIL SYSTEM SAFEROAD SN2 STEEL PARAPET

| -      | -    | _       |                     |                  | _            |      |
|--------|------|---------|---------------------|------------------|--------------|------|
| EVN.   | DATE | REMARKS |                     |                  |              | SIG. |
| IATL:- |      |         | DRAWN:-<br>H.BRYDON | CHECKED:-<br>R.B | CHECKED QA:- |      |
|        |      |         | 0.175               | 00115            | 10000150     |      |

ORDER No:-PROJECTION: 27/10/17 As shown at A ISSUE DATE:-REV:-GA - 005