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**NR CIV/SD/1047** Rev B

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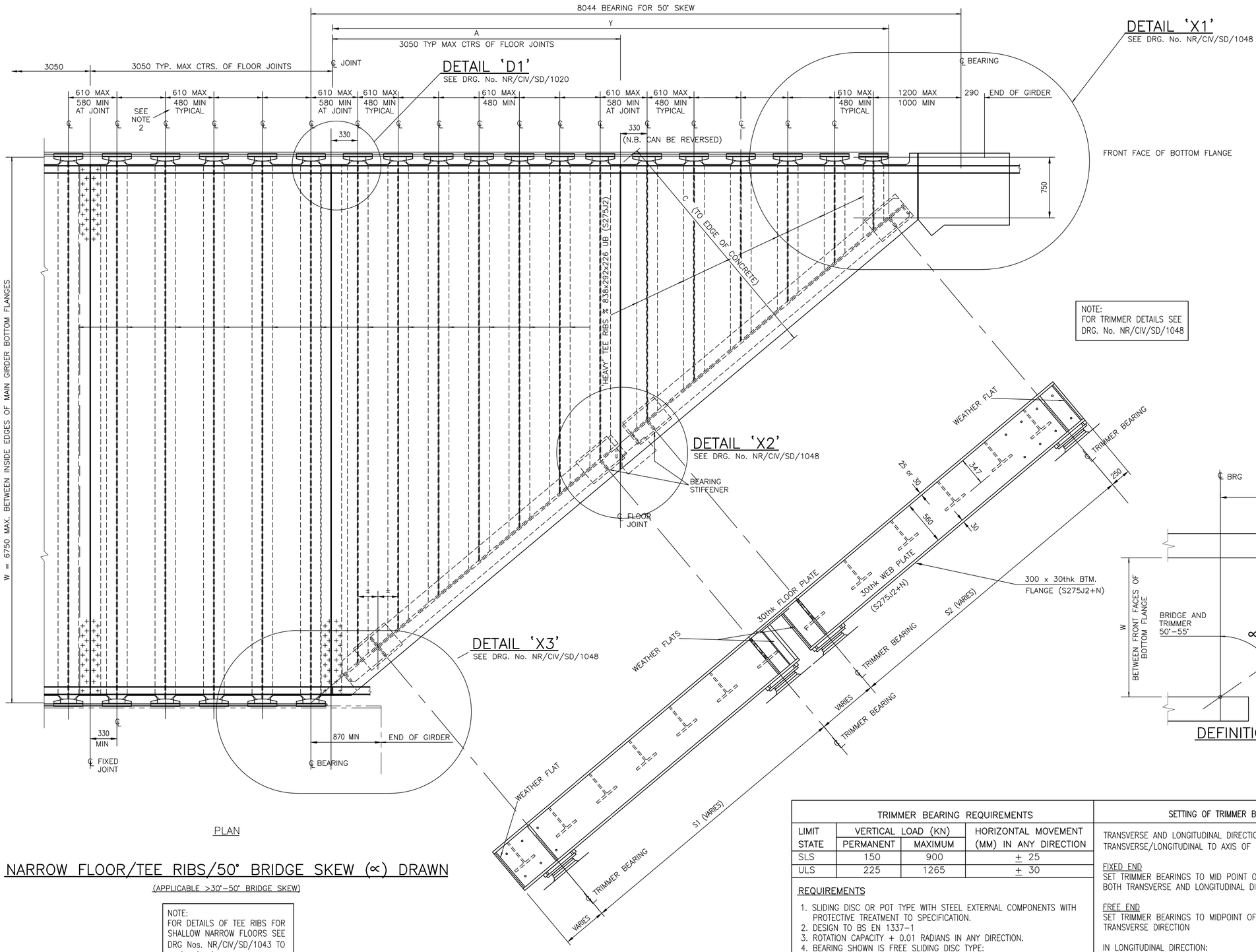



PLAN

## NARROW FLOOR/TEE RIBS/50° BRIDGE SKEW (∝) DRAWN

(APPLICABLE >30°–50° BRIDGE SKEW)

NOTE:
FOR DETAILS OF TEE RIBS FOR SHALLOW NARROW FLOORS SEE DRG Nos. NR/CIV/SD/1043 TO NR/CIV/SD/1046

NOTE:
FOR TRIMMER DETAILS SEE DRG. No. NR/CIV/SD/1048

### TRIMMER SETTING OUT

TRIMMER LENGTHS TO BE MADE APPROXIMATELY EQUAL USING THE FOLLOWING FORMULA:

$$\frac{Y}{2} - 300 < A < \frac{Y}{2} + 300$$

IF A OR C EXCEED 3500*mm THEN TRIMMER IS TO BE SPLIT INTO THREE SECTIONS AS FOR 50 – 55° RANGE

* ABSOLUTE MAXIMUM FOR TRANSPORTATION

WORKED EXAMPLE:

SKEW : ∝ = 50°
FLOOR WIDTH : W = 6750
BEARING LEAD : BL = 8044

Y = 8044 – (580–330) – (750 tan 55°)
= 6900

A = 3750 < A < 3150

CHOOSE TEE RIB SPACING TO SUIT A, B AND TO GIVE APPROXIMATELY EQUAL TRIMMER SPANS.

A (SHOWN) = 3580

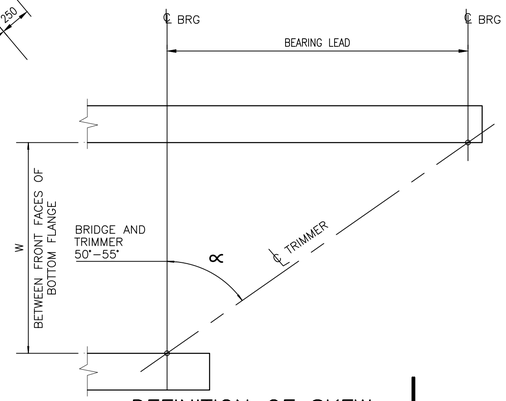
C (SHOWN) = 3024

S1 = 3589
S2 = 3903

E.G. $S1 = \sin^{-1}\propto (A-330-\frac{500}{2}-(580-330))$

$= \sin^{-1} 50(3850-330-\frac{500}{2}-(580-330))$

= 3589




DEFINITION OF SKEW
(NTS)

### TRIMMER BEARING REQUIREMENTS

| LIMIT STATE | VERTICAL LOAD (KN) PERMANENT | VERTICAL LOAD (KN) MAXIMUM | HORIZONTAL MOVEMENT (MM) IN ANY DIRECTION |
|---|---|---|---|
| SLS | 150 | 900 | ± 25 |
| ULS | 225 | 1265 | ± 30 |

REQUIREMENTS

1. SLIDING DISC OR POT TYPE WITH STEEL EXTERNAL COMPONENTS WITH PROTECTIVE TREATMENT TO SPECIFICATION.
2. DESIGN TO BS EN 1337–1
3. ROTATION CAPACITY + 0.01 RADIANS IN ANY DIRECTION.
4. BEARING SHOWN IS FREE SLIDING DISC TYPE:
   MAX RATING 1000KN at SLS
   TOP PLATE DIMENSION: 350 x 455
   BASE PLATE DIMENSION: 250x250

DIMENSIONS INDICATED THUS ‡ ON DRG.NR/CIV/SD/1033 ARE SUBJECT TO ACTUAL BEARING TO BE USED.

### SETTING OF TRIMMER BEARINGS

TRANSVERSE AND LONGITUDINAL DIRECTIONS ARE DEFINED AS TRANSVERSE/LONGITUDINAL TO AXIS OF MAIN GIRDER

FIXED END
SET TRIMMER BEARINGS TO MID POINT OF MOVEMENT RANGE IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS

FREE END
SET TRIMMER BEARINGS TO MIDPOINT OF MOVEMENT RANGE IN TRANSVERSE DIRECTION

IN LONGITUDINAL DIRECTION:
FOR SPANS UP TO 27m:
OFFSET BEARING BY 0.33mm FOR EACH DEGREE ABOVE OR BELOW 10°C

FOR SPANS > 27m:
OFFSET BEARING BY 0.5mm FOR EACH DEGREE ABOVE OR BELOW 10°C

1. TEE RIBS SHALL BE FORMED IN ONE LENGTH, INTERMEDIATE WELDED JOINTS ARE NOT PERMITTED.
2. 580 RIB SPACING IS DESIRABLE MINIMUM TO ALLOW WELDING PROTECTIVE TREATMENT & MAINTENANCE. ABSOLUTE MINIMUM IN PARTICULAR SITUATIONS.
3. SEE DRG No, NR/CIV/SD/1020 FOR LOCATION OF FLOOR PLATE BUTT WELDS.

| Rev | Date | Description of revision | Design'd | C'kd |
|---|---|---|---|---|
| B | Dec 10 | EUROCODE ISSUE | CH | MM |
| A | Dec 09 | ORIGINAL ISSUE | CH | MM |

Network Rail
Network Rail Infrastructure Ltd
Registered Office:
Kings Place
90 York Way
London
N1 9AG

| Approved | P Clark | Senior Programme Engineering Manager (Building & Civils) | P.C. | Dec–10 |
|---|---|---|---|---|
| | Name | Position | Signature | Date |

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STANDARD HALF THROUGH UNDERBRIDGES
BOX GIRDERS & TRANSVERSE RIBBED FLOORS

# DOUBLE TRACK – 2 GIRDERS ALTERNATIVE TRIMMER

NARROW FLOORS >30° – 50° SKEW

SHEET 1 OF 2

| Scale | 1:25 | |
|---|---|---|
| Drawing Number | NR/CIV/SD/1047 | B |

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