Supplementary Information

The following information is associated with Network Rail Standard:
NR CIV/SD/264 Rev C

Additional Content Access

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CAD Drawing

- CIV/SD/264

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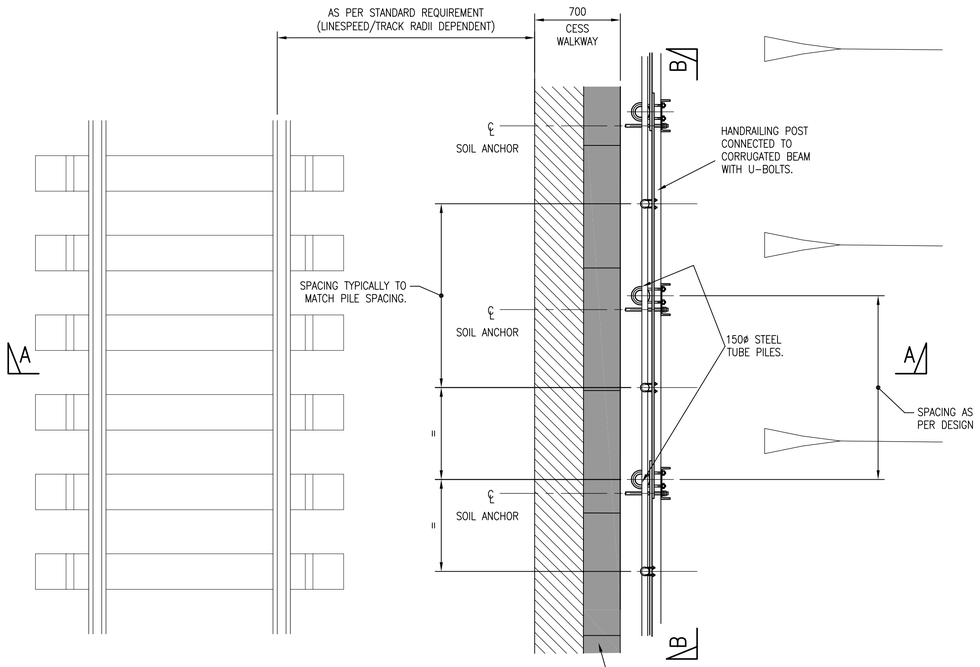
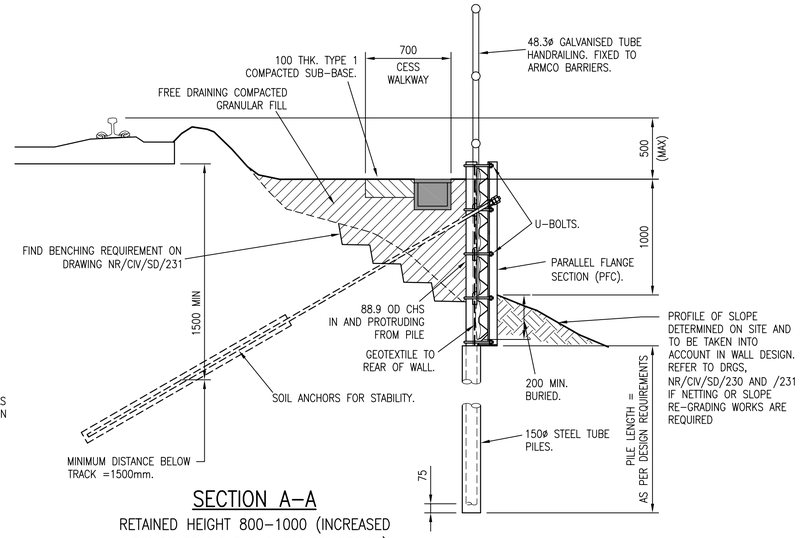


PLAN

PILE SPACING @ 1500 SHOWN.
(DESIGNER TO CONFIRM)
SCALE 1:25



SECTION A–A

RETAINED HEIGHT 800–1000 (INCREASED
HEIGHTS FEASIBLE SUBJECT TO DESIGN)
SCALE 1:25

NOTES CONTINUED:

SOIL ANCHORS

B6 THE PROPERTIES OF THE SOIL ANCHORS SHALL BE CONFIRMED BY THE DESIGNER (LENGTH, BORE DIAMETER ETC). IT IS ENVISAGED SUITABILITY TESTS WILL BE REQUIRED TO VERIFY THE ANCHOR DESIGN.

B7 THE DESIGNER SHALL CONFIRM THE MOVEMENTS REQUIRED TO MOBILISE THE REQUIRED LOADS IN THE SOIL ANCHORS ARE ACCEPTABLE. DESIGNER TO CONSIDER PROVIDING A PRELOAD TO REDUCE MOVEMENTS.

B8 SOIL ANCHORS SHALL BE DOUBLE CORROSION–PROTECTED. THE REQUIREMENT FOR PROTECTIVE COATING SHALL BE DETERMINED BY THE DESIGNER IN DETERMINING THE APPROPRIATE SACRIFICIAL THICKNESS. REFERENCE CAN BE MADE TO SECTION 9 OF CIRIA GUIDE C637. APPROPRIATE ANCHOR HEAD PROTECTION FOR THE ENVIRONMENT SHALL BE PROVIDED.

B9 SIZING ALL COMPONENTS OF THE SOIL ANCHOR. CONSIDERATION SHALL BE GIVEN TO THE FOLLOWING:–
- INCLINATION
- GROUT BORE DIA.
- ANCHOR STRENGTH (TAKING ACCOUNT ANY SACRIFICIAL LOSS)
- FACE PLATE SIZE AND THICKNESS.
- CORROSION PROTECTION

B10 SOIL ANCHORS SHALL BE A MINIMUM OF 1500mm BELOW THE SLEEPERS.

B11 SOIL ANCHORS TO BE INSTALLED AND TESTED IN ACCORDANCE WITH THE PROJECT SPECIFIC SPECIFICATION.

GROUT

B12 CEMENTITIOUS GROUT FOR PILE / SOIL ANCHOR INSTALLATION SHALL HAVE A MINIMUM CUBE STRENGTH OF 40N/mm² (28 DAYS). WATER/CEMENT RATIO NOT TO EXCEED 0.45 GROUT CUBE SAMPLES (3No.) ARE TO BE TAKEN AND TESTED INITIALLY EVERY 5TH SOIL NAIL INSTALLATION.

BACKFILL

B13 GRANULAR FILL MATERIALS TO BE FREE DRAINING AND PLACED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAYS WORKS. SUITABLE FILL IS HA CLASS 6N GRANULAR FILL. OTHER CLASSES OF BACKFILL CAN BE CONSIDERED FOR USE BEHIND THE WALL SUBJECT TO THE NECESSARY LABORATORY CLASSIFICATION AND STRENGTH TESTS AND WALL STABILITY DESIGN.

PROTECTIVE TREATMENT

B14 THE PROTECTIVE SYSTEM SHALL BE IN ACCORDANCE WITH NR/SP/CIV/039 (REFERRED TO AS RT98)

B15 PROTECTIVE TREATMENTS SHALL BE APPLIED IN ACCORDANCE WITH NR/GN/CIV/002.

B16 NOTE THE STEEL ON THE OUTSIDE OF THE DRIVEN TUBULAR PILE IS CONSIDERED SACRIFICIAL.

DRAWING No. NR/CIV/SD/264

NOTES

1 FOR GENERAL NOTES SEE DRG NR/CIV/SD/260.

2 FOR GENERIC RISK ASSESSMENT, REFER TO DRG NR/CIV/SD/260 TABLE 1. DESIGNER TO COMPILE SITE SPECIFIC RISK ASSESSMENT.

A GENERAL

A1 DESIGNER WILL NEED TO CONFIRM THE WALL AND SLOPE STABILITY AT ALL THE CONSTRUCTION STAGES.

A2 OFFSET DIMENSIONS FOR WALL MAY NEED TO BE INCREASED TO FACILITATE CONSTRUCTION.

A3 THE DESIGNER OF A SCHEME SHALL BE RESPONSIBLE FOR SPECIFYING THE REQUIRED PILE DEPTH AND SPACING.

A4 ANY REQUIREMENT TO ALLOW FOR FUTURE TRACK LIFTS WHEN DEFINING THE CESS WALKWAY LEVEL WILL NEED TO BE AGREED WITH THE ASSET ENGINEER AS PART OF THE PROJECT REMIT.

B SPECIFICATION

STEELWORK

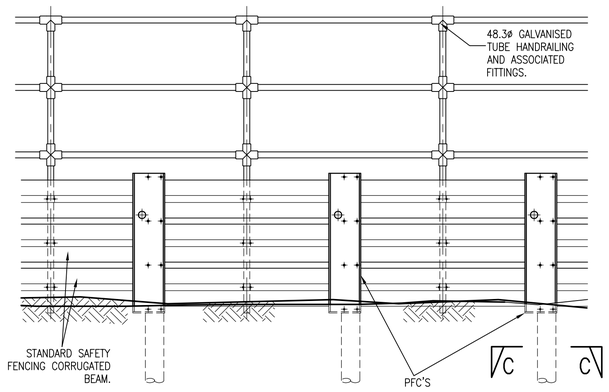
B1 STEELWORK TO BE GRADE S275 (UNLESS NOTIFIED OTHERWISE) IN ACCORDANCE WITH EN 1993–1 AND BS EN 10025.

B2 ALL STEELWORK TO BE HOT DIP GALVANISED TO BS EN ISO 1461 TO ACHIEVE A COATING THICKNESS = 85 MICRONS.

B3 ALL WELDING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN 1011.

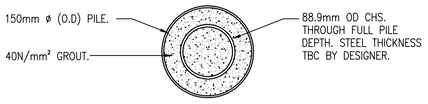
B4 ALL "U" BOLTS AND NAIL DIAMETER HOLE/SLOT CLEARANCES TO BE PHYSICALLY CHECKED PRIOR TO WORKS (TO ALLOW FOR GALVANISING).

B5 ALL WELDS TO BE 6MM FILLET WELDS.



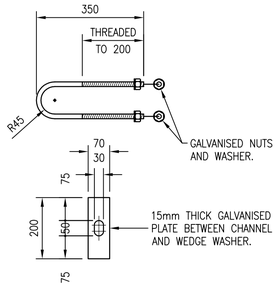
SECTION B–B

SCALE 1:25



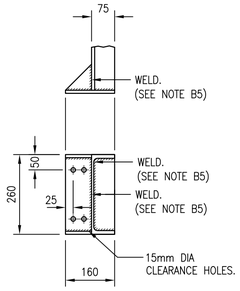
SECTION C–C

SCALE 1:5



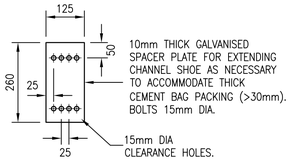
PILE/CHANNEL FIXING DETAILS

SCALE 1:10



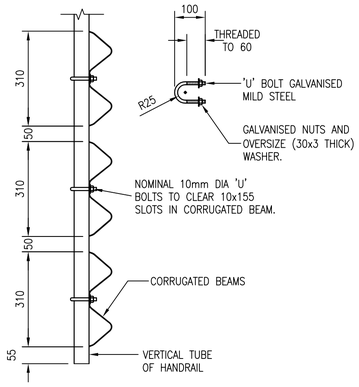
CHANNEL SHOE DETAIL

SCALE 1:10



SPACER PLATE DETAIL

SCALE 1:10



HANDRAIL FIXING DETAILS

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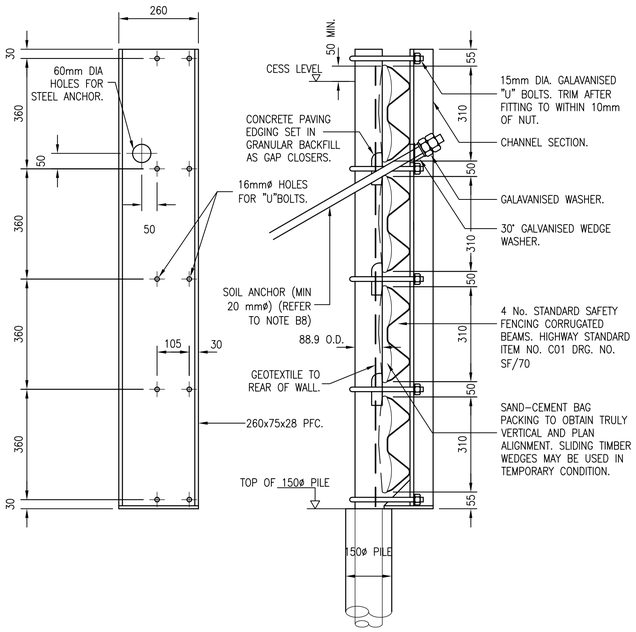

DETAIL OF CHANNEL SECTION

SCALE 1:10

Rev	Date	Description of revision	Design'd	C'kd
C	MAY 2011	THIRD ISSUE	RKA	AW
B	25.05.07	SECOND ISSUE	GPR	NGAY

Network Rail

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	Name	Position	Signature	Date

Master copy with original signatures held by Network Rail HQ
CIVIL ENGINEERING STANDARD DESIGN

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CESS SUPPORT STRUCTURES

UNANCHORED DRIVEN TUBULAR PILE ARMCO TYPE

Scale	AS SHOWN	
Drawing Number	NR/CIV/SD/264	REV. C

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