

0 50 100 150 200 250 300 m

SCALE: 1:5,000 AT ORIGINAL SIZE

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

Aurizon Track Centreline

ARTC HRR Rail Centreline

Design Access Road

Minor Road

Major Road

Level Crossing

Potential ARTC Aurizon Fence Line

Tarro Interchange

Railway

HWC Pipeline

Proposed HWC Main Relocation

Jemena Pipeline

Irrigation Area

Drainage Facilities

Effluent Pond

Structure Footprint

Survey Cadastre

Lots

Cadastral Site Boundary

Road Corridor

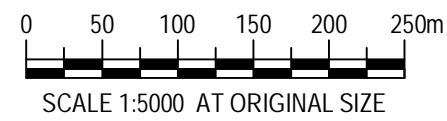
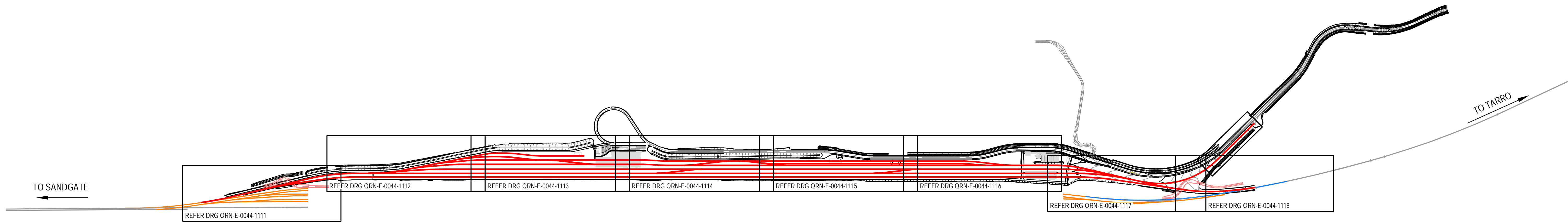
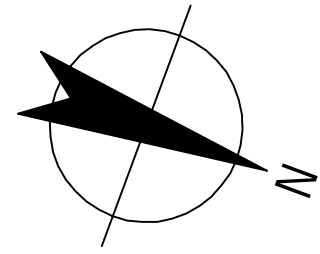
Railway Corridor

National Park

Water Feature

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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING			PROJECT No. 22-16395			DRAWING No.			HEXHAM TO TARRO NSW LONG TERM TRAIN SUPPORT FACILITY 176.000km MAIN NORTH LINE LOCALITY MAP			FILE No.		
												DRAWING NUMBER		
												QRN-E-0044-1008		
												ISSUE		
												1		

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Data source: LPM: DCDB/DTDB - 2012; Parsons Brinckerhoff: Potential ARTC-Aurizon Fence Line - 2012. Created by mbarnier



RAIL ALIGNMENT
PLAN

SCALE 1:5000

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS

Cad File No: G:\2216395\CAAD\Drawings\QRN-E-1044-1101-1101.dwg

Plotted by: Glenn Coppard

Plot Date: 8 March 2013 - 3:16 p.m.

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ALTERATIONS

1	FOR 90% PROJECT REVIEW	1.2.13	AGM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13	AGM



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PROJECT No. 22-16395

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DRAFTING CHECK		ISSUE AUTHORISED
APPROVED		
	DATE	DATE



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HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
RAIL ALIGNMENT
GENERAL ARRANGEMENT

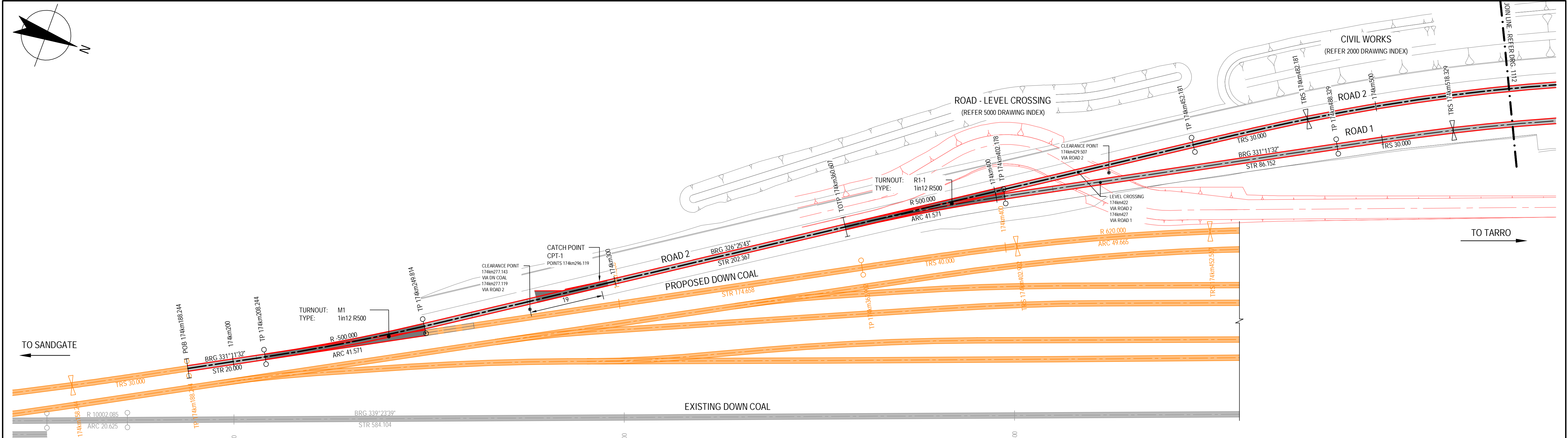
FILE No. QRN-E-0044-1100-1101.DWG

DRAWING NUMBER

QRN-E-0044-1101

ISSUE

2



VERTICAL 1:50
AT ORIGINAL SIZE
HORIZONTAL 1:500
AT ORIGINAL SIZE

RAIL ALIGNMENT

PLAN

SCALE 1:500

LEGEND

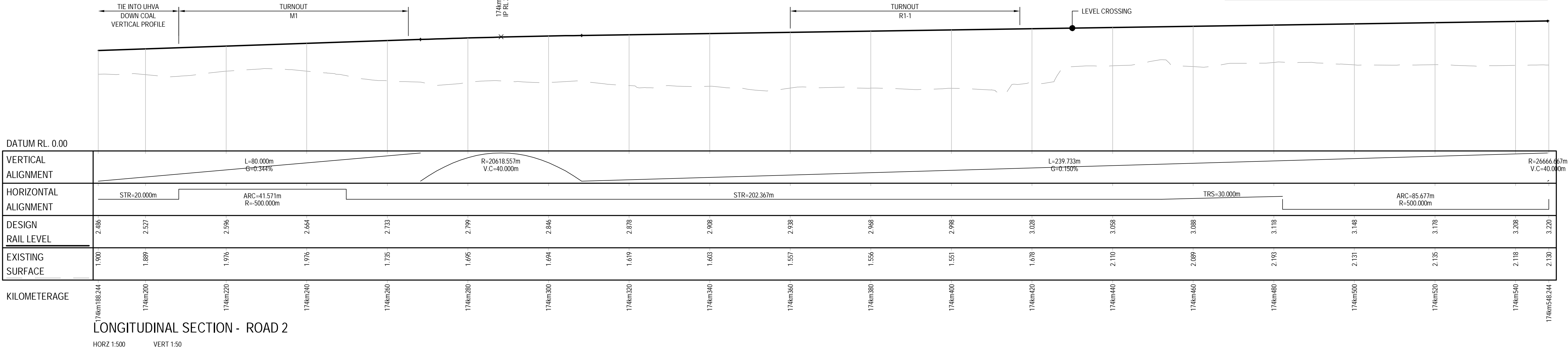
- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS

NOTES:

- REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
- REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES

RAIL TRACK:

- ALL NEW TRACKWORK TO COMPLY WITH ARTC STANDARDS AND THE ARTC HUNTER VALLEY CONSTRUCTION SPECIFICATION.
- KILOMETERAGE ORIGIN - ARTC PROPOSED HRR DOWN COAL ALIGNMENT SUPPLIED BY UHVA.
- TRACK CLASSIFICATION - 60 HHF 30 IN ACCORDANCE WITH ARTC COP SECTION 0.
- RAIL OUTSIDE BUILDINGS TO BE 60AS STANDARD.
- RAIL INSIDE BUILDINGS TO 60AS HEAD HARDENED.
- DESIGN RAIL IS DEFINED AS THE THEORETICAL LEVEL OF THE RUNNING SURFACE OF THE RAILS IN ACCORDANCE WITH ETM-08-01.
- EXISTING RAIL LEVEL IS DEFINED AS THE SURVEYED LEVEL OF THE RUNNING SURFACE OF THE RAILS.
- BALLAST MINIMUM 300mm BELOW SLEEPERS .
- EXISTING SURFACE IS DEFINED AS THE SURVEY GROUND SURFACE.
- THESE DRAWINGS DO NOT INCLUDE SIGNALING WORKS.
- THESE DRAWINGS DO NOT DETAIL TRACK POSSESSION FOR CONNECTION WORKS AND CONSTRUCTION STAGING.



LONGITUDINAL SECTION - ROAD 2

HORZ 1:500 VERT 1:50

ALTERATIONS

1	FOR 90% PROJECT REVIEW	1.2.13	ACM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13	ACM



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APPROVED		
	DATE	DATE



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HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
RAIL ALIGNMENT PLAN AND LONG SECTION
ROAD 2 - SHEET 1 of 8

FILE No. QRN-E-0044-1111-1118.DWG

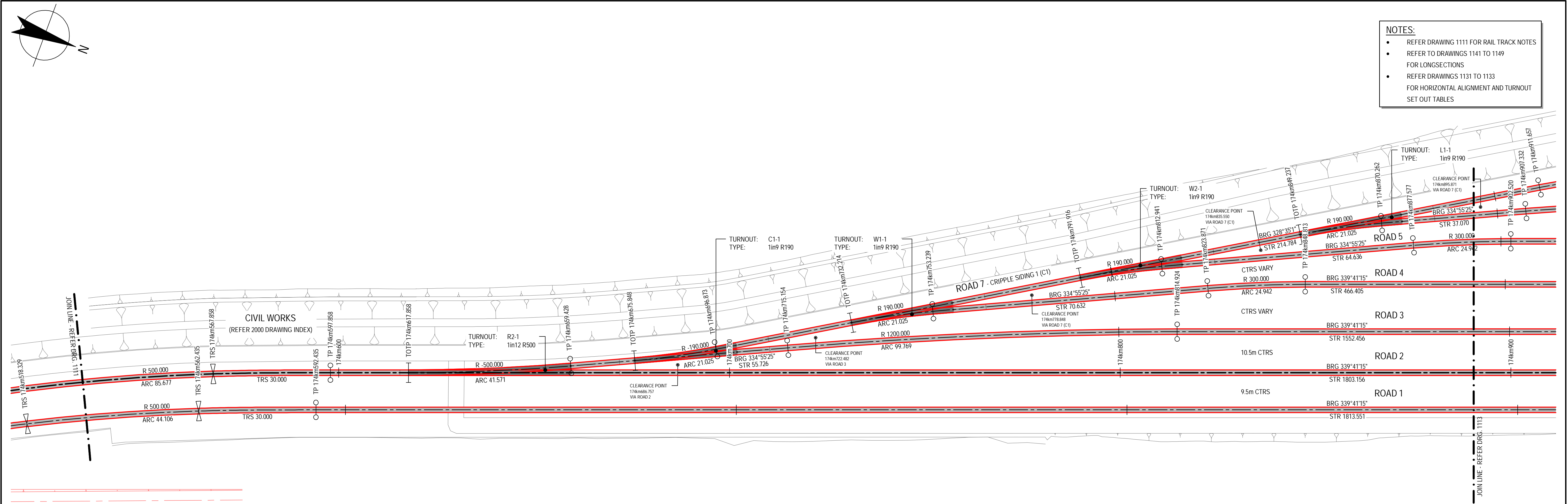
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QRN-E-0044-1111

ISSUE

2

SCALES SHOWN ARE FOR AN
A1 SIZE ORIGINAL DRAWING



- NOTES:
- REFER DRAWING 1111 FOR RAIL TRACK NOTES
 - REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
 - REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES

TO SANDGATE

VERTICAL 1:50
AT ORIGINAL SIZE
HORIZONTAL 1:500
AT ORIGINAL SIZE

RAIL ALIGNMENT

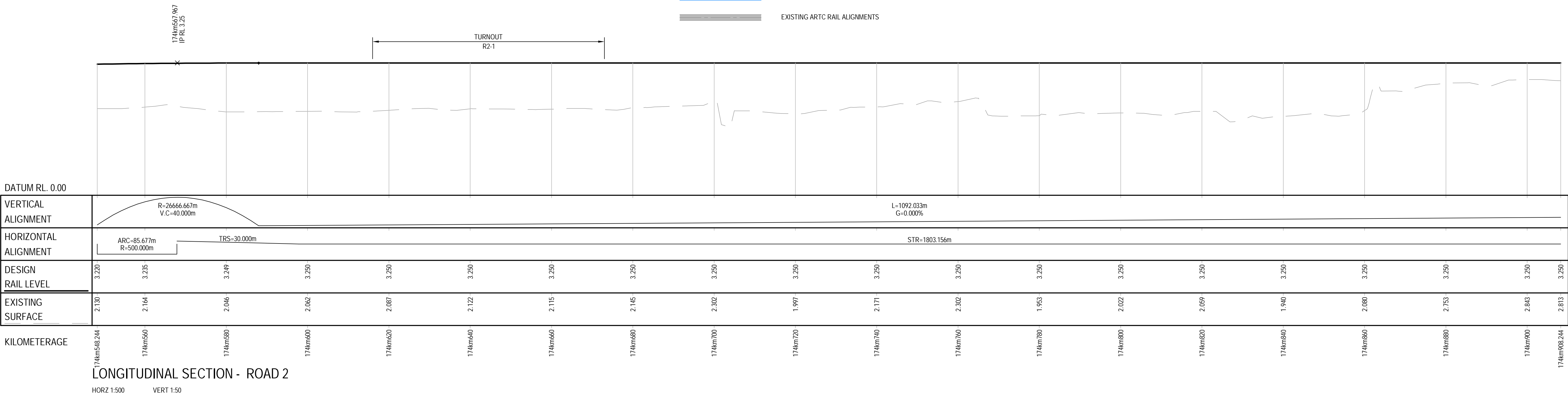
PLAN

SCALE 1:500

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS

TO TARRO



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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS		
1	FOR 90% PROJECT REVIEW	1.2.13 AGM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13 AGM

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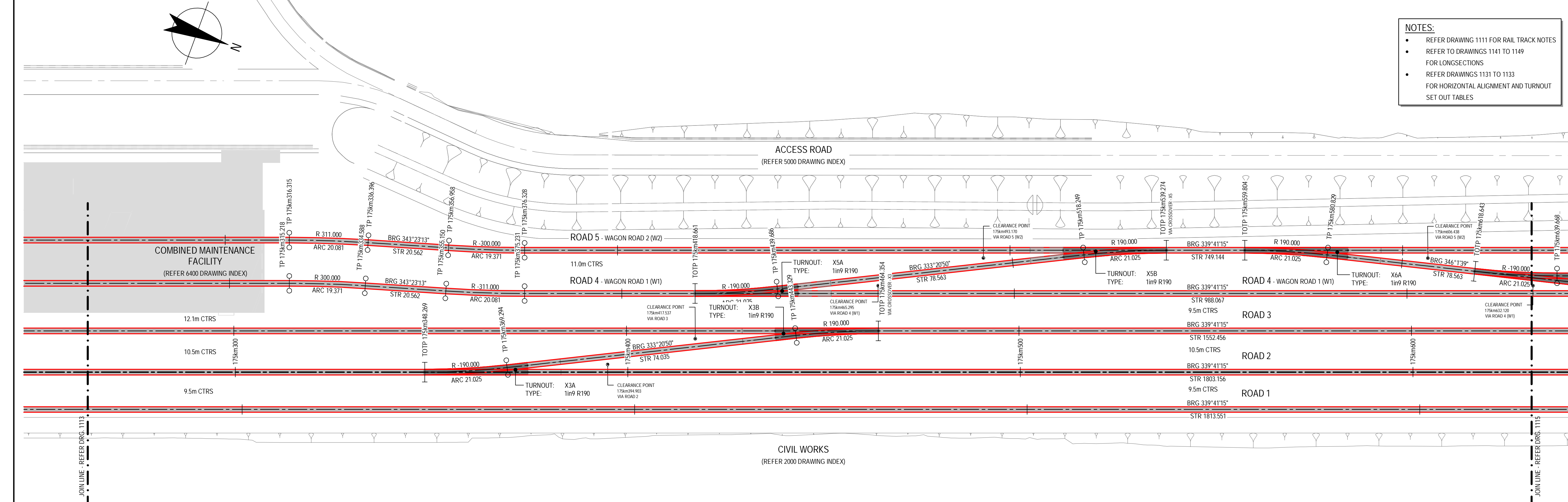
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HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
RAIL ALIGNMENT PLAN AND LONG SECTION
ROAD 2 - SHEET 2 of 8

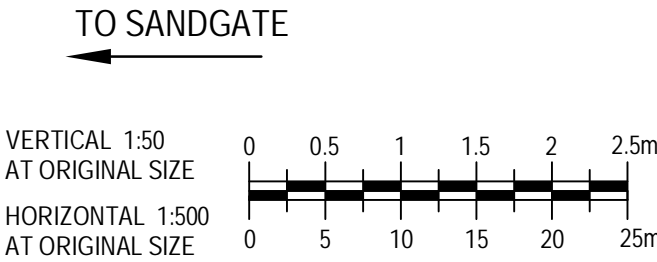
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DRAWING NUMBER
QRN-E-0044-1112

ISSUE
2



- NOTES:
- REFER DRAWING 1111 FOR RAIL TRACK NOTES
 - REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
 - REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES



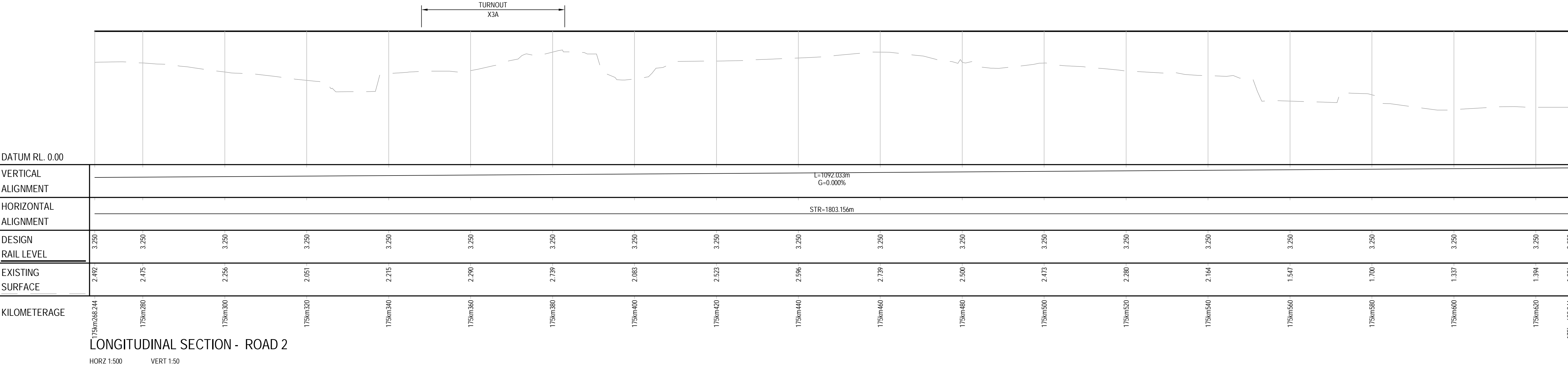
RAIL ALIGNMENT

PLAN

SCALE 1:500

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS



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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS			
1	FOR 90% PROJECT REVIEW	1.2.13	ACM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13	ACM

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DRAWN			
DRAFTING CHECK	G.COPPARD	DESIGN MANAGER	DATE
APPROVED		ISSUE AUTHORISED	



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HEXHAM TO TARRO

NSW LONG TERM TRAIN SUPPORT FACILITY

176.000 km MAIN NORTH LINE

RAIL ALIGNMENT PLAN AND LONG SECTION

ROAD 2 - SHEET 4 of 8

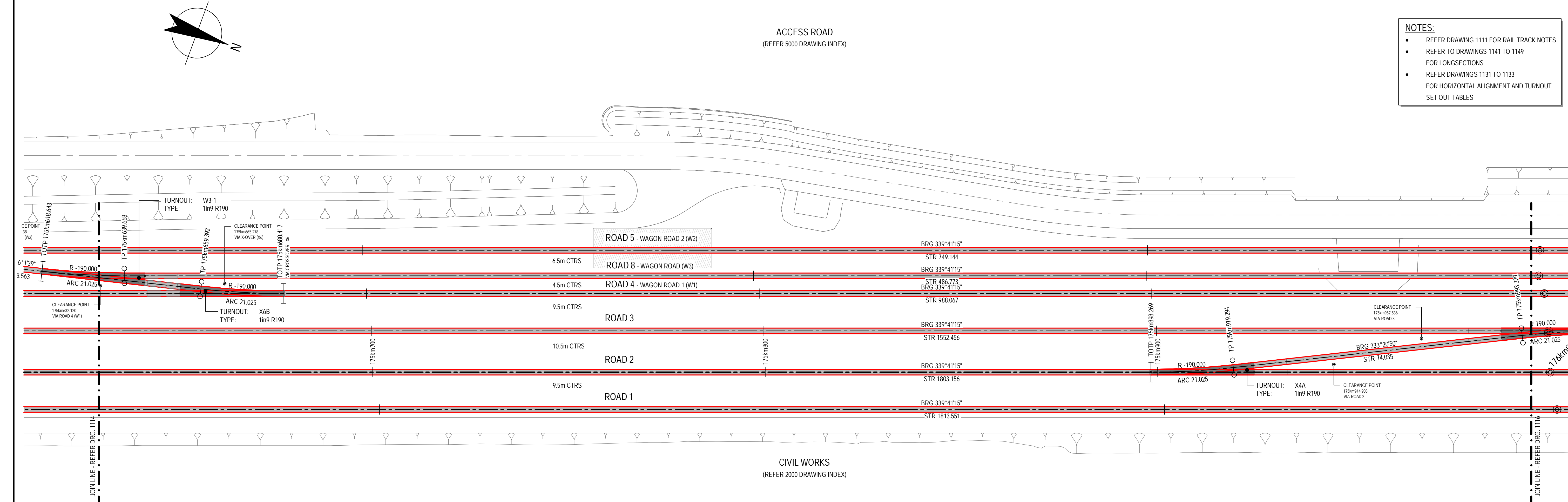
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DRAWING NUMBER

QRN-E-0044-1114

ISSUE

2



- NOTES:
- REFER DRAWING 1111 FOR RAIL TRACK NOTES
 - REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
 - REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES

VERTICAL 1:50
AT ORIGINAL SIZE
HORIZONTAL 1:500
AT ORIGINAL SIZE

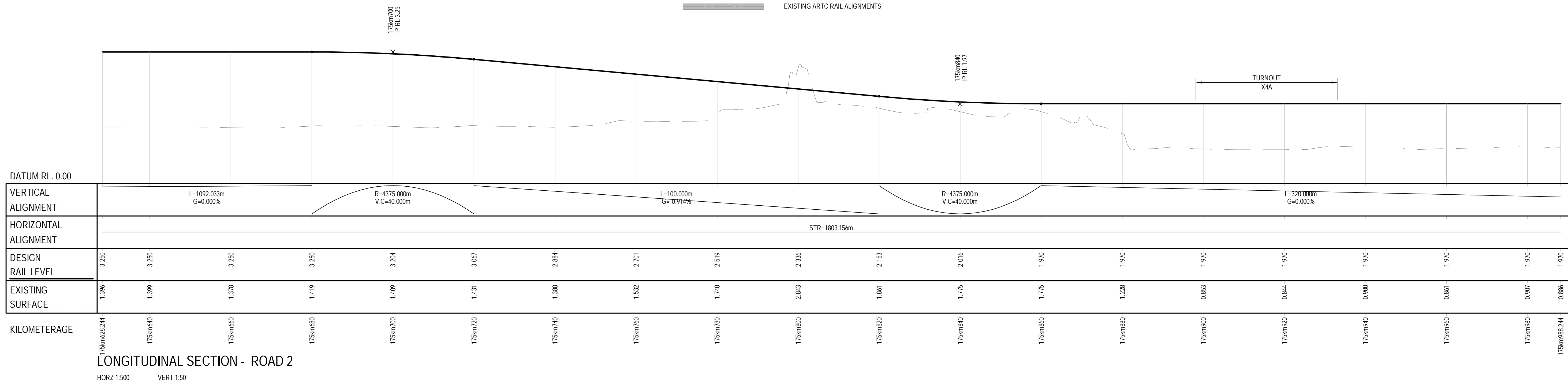
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RAIL ALIGNMENT
PLAN

SCALE 1:500

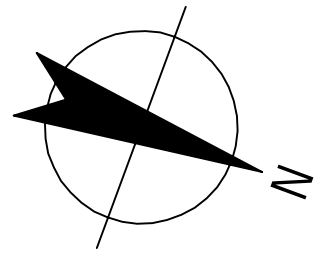
LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS

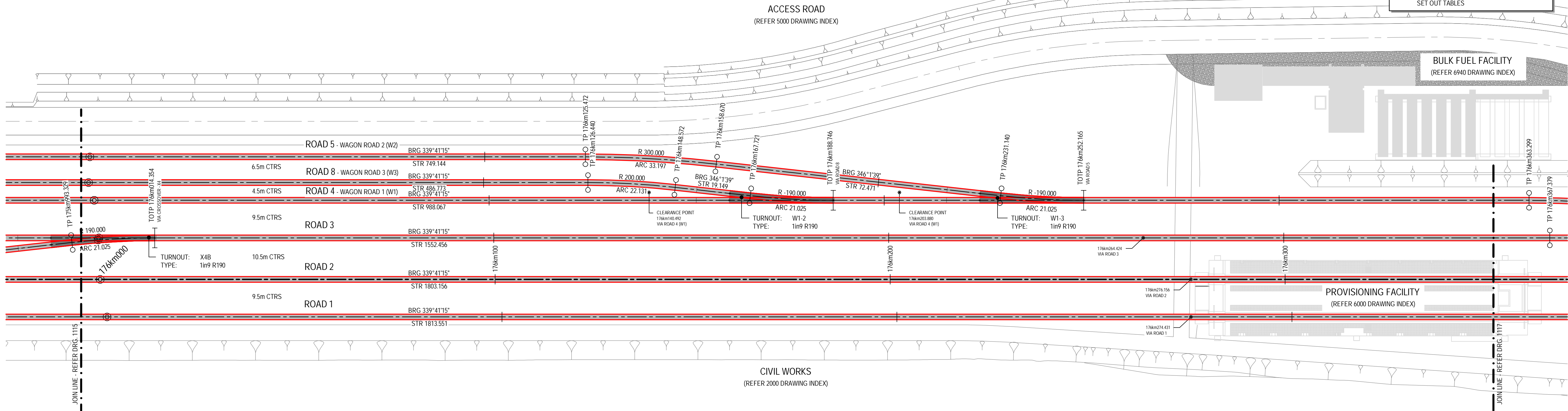


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1 FOR 90% PROJECT REVIEW			1.2.13 AGM			DESIGN CHECKED			DESIGN MANAGER			HEXHAM TO TARRO		
2 90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL			3.3.13 AGM			DRAWN			ISSUE AUTHORISED			NSW LONG TERM TRAIN SUPPORT FACILITY		
						DRAFTING CHECK			DATE			176.000 km MAIN NORTH LINE		
						APPROVED			DATE			RAIL ALIGNMENT PLAN AND LONG SECTION		
												ROAD 2 - SHEET 5 of 8		
SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING												FILE No. QRN-E-0044-1111-1118.DWG		
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												ISSUE		
												2		



- NOTES:
- REFER DRAWING 1111 FOR RAIL TRACK NOTES
 - REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
 - REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES



RAIL ALIGNMENT

PLAN

SCALE 1:500

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS

TO SANDGATE

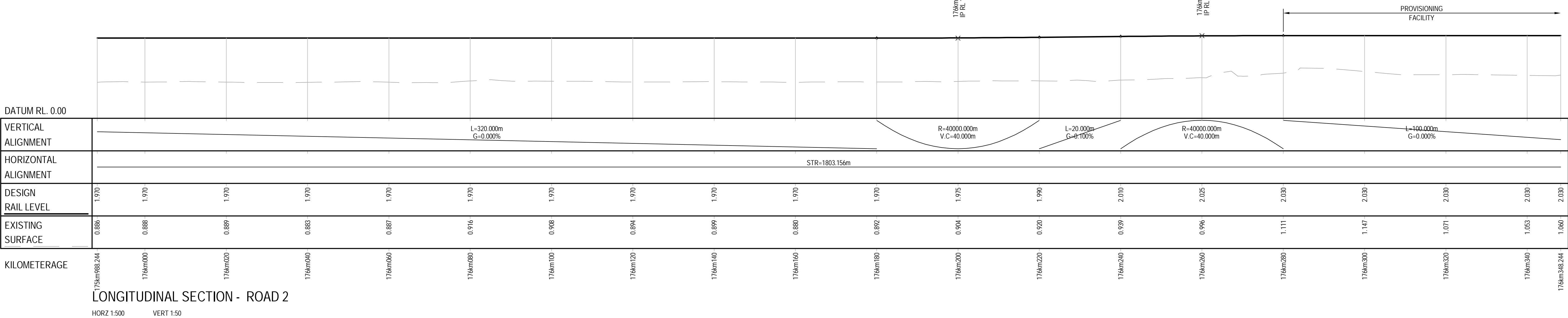
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AT ORIGINAL SIZE

HORIZONTAL 1:500
AT ORIGINAL SIZE

0 0.5 1 1.5 2 2.5m

0 5 10 15 20 25m

TO TARRO



ALTERATIONS

1	FOR 90% PROJECT REVIEW	1.2.13	ACM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13	ACM



PROJECT No. 22-16395

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	DATE	DATE



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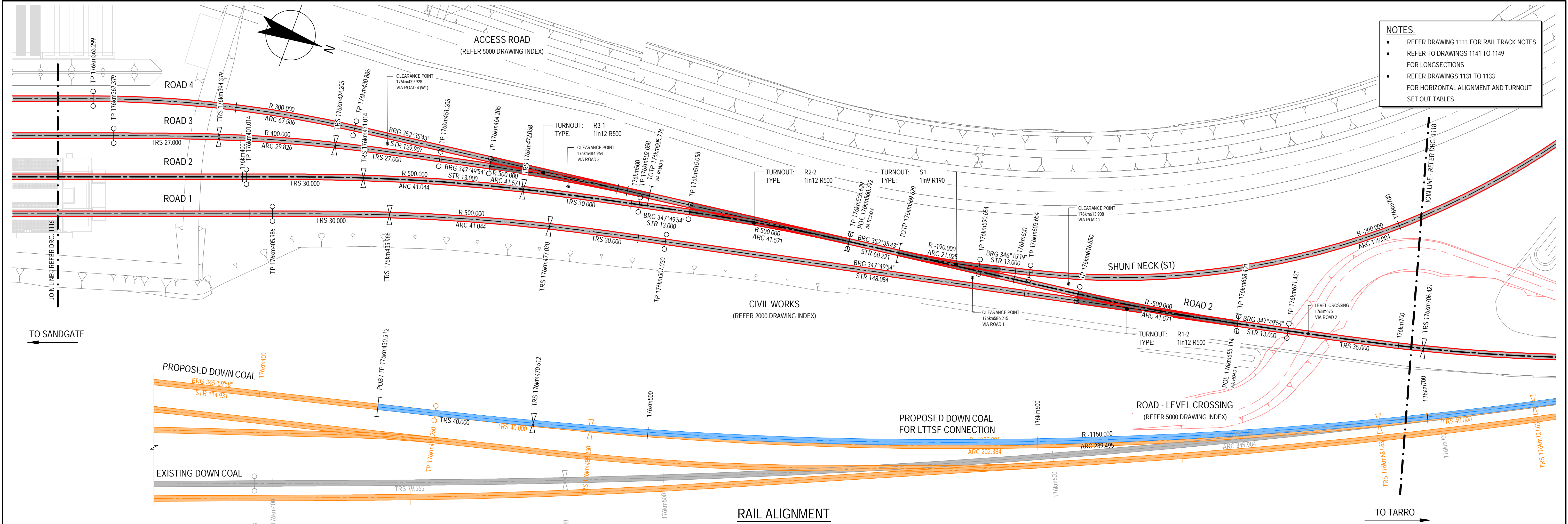
HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
RAIL ALIGNMENT PLAN AND LONG SECTION
ROAD 2 - SHEET 6 of 8

FILE No. QRN-E-0044-1111-1118.DWG

DRAWING NUMBER
QRN-E-0044-1116

ISSUE
2

SCALES SHOWN ARE FOR AN
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- NOTES:
- REFER DRAWING 1111 FOR RAIL TRACK NOTES
 - REFER TO DRAWINGS 1141 TO 1149 FOR LONGSECTIONS
 - REFER DRAWINGS 1131 TO 1133 FOR HORIZONTAL ALIGNMENT AND TURNOUT SET OUT TABLES

VERTICAL 1:50
AT ORIGINAL SIZE
HORIZONTAL 1:500
AT ORIGINAL SIZE

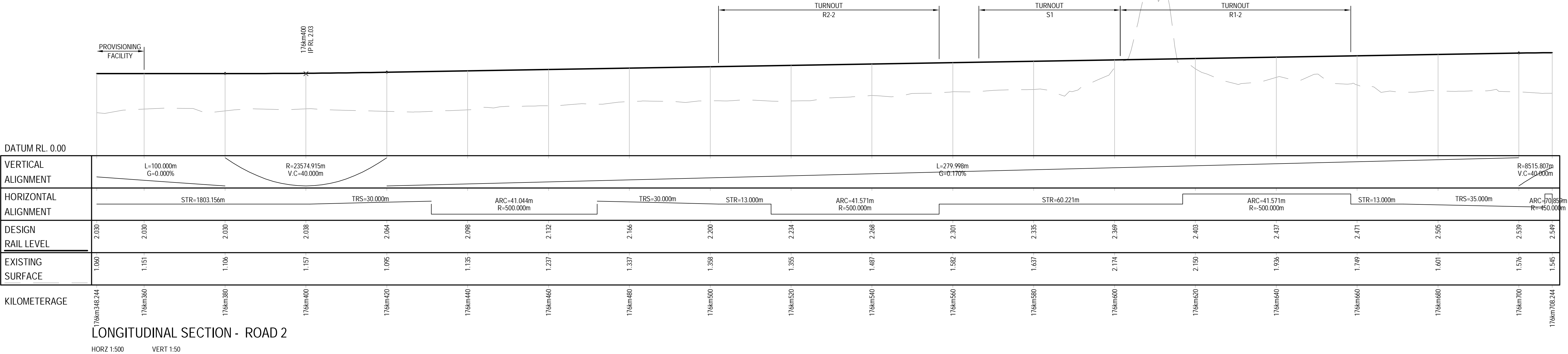
RAIL ALIGNMENT

PLAN

SCALE 1:500

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
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- EXISTING ARTC RAIL ALIGNMENTS



ALTERATIONS

1	FOR 90% PROJECT REVIEW	1.2.13	ACM
2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13	ACM



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DRAWN	G.COPPARD	DESIGN MANAGER
DRAFTING CHECK		DATE
APPROVED		ISSUE AUTHORISED
	DATE	DATE



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HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
RAIL ALIGNMENT PLAN AND LONG SECTION
ROAD 2 - SHEET 7 of 8

FILE No. QRN-E-0044-1111-1118.DWG

DRAWING NUMBER

QRN-E-0044-1117

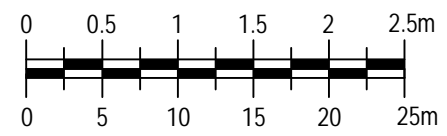
ISSUE

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SCALES SHOWN ARE FOR AN
A1 SIZE ORIGINAL DRAWING



VERTICAL 1:50
AT ORIGINAL SIZE
HORIZONTAL 1:500
AT ORIGINAL SIZE

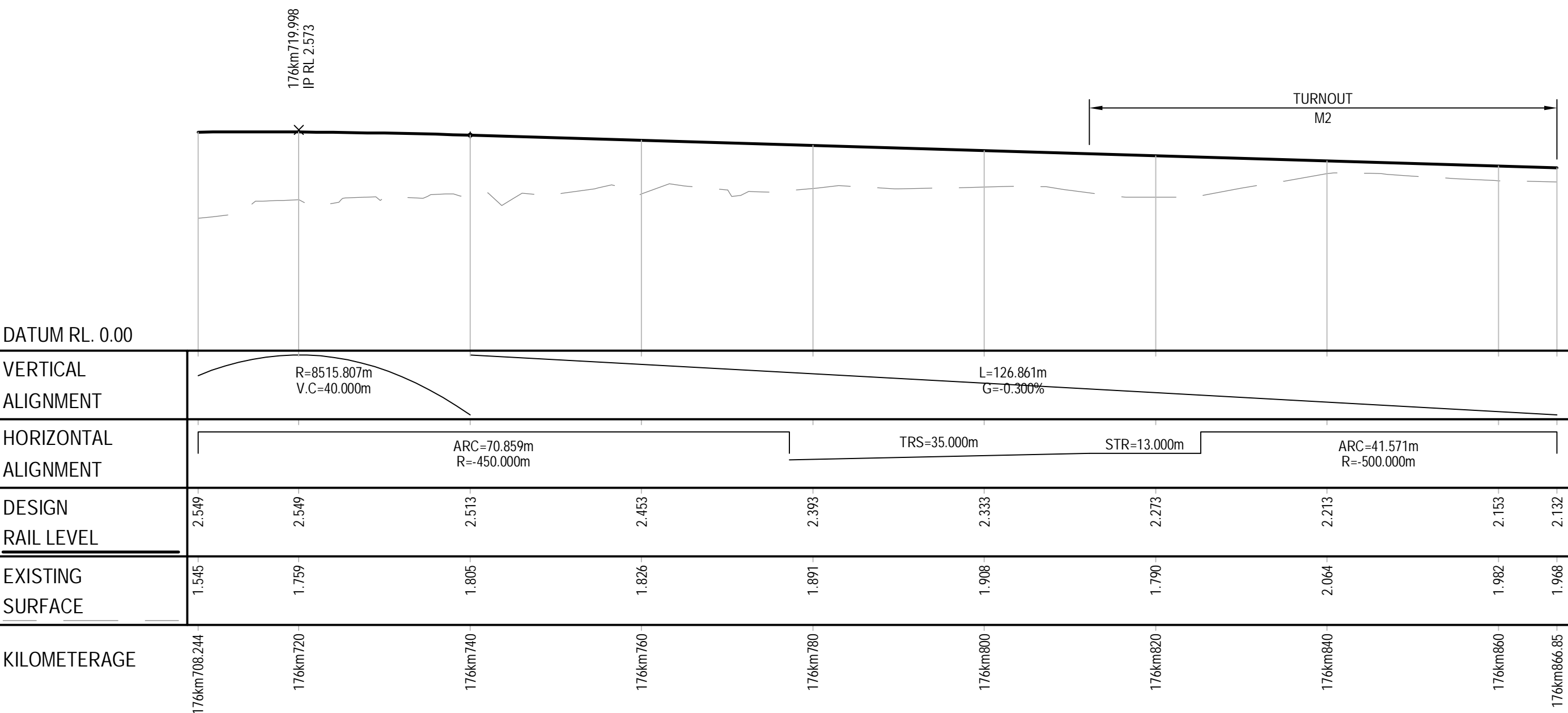


RAIL ALIGNMENT
PLAN

SCALE 1:500

LEGEND

- PROPOSED LTTSF RAIL ALIGNMENTS
- PROPOSED ARTC - HRR RAIL ALIGNMENTS BY UHVA
- PROPOSED LTTSF DOWN COAL RAIL ALIGNMENT
- EXISTING ARTC RAIL ALIGNMENTS



LONGITUDINAL SECTION - ROAD 2

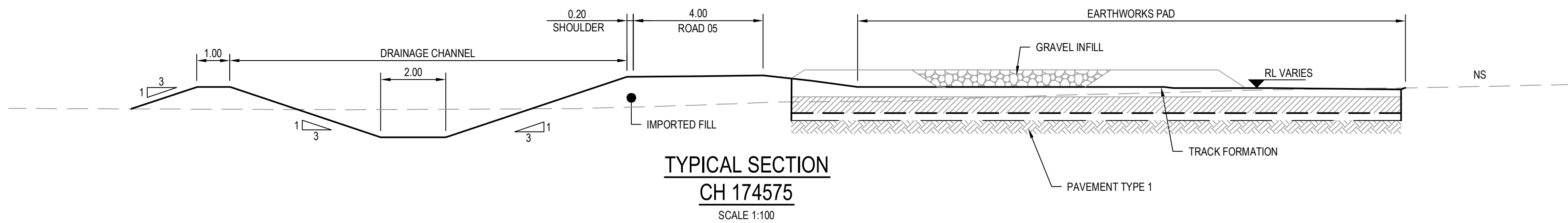
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Plot Date: 8 March 2019 - 3:14 p.m.

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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING		1 FOR 90% PROJECT REVIEW	1.2.13 AGM		DRAWN G.COPPARD	DESIGN MANAGER		DATE	HEXHAM TO TARRO NSW LONG TERM TRAIN SUPPORT FACILITY 176.000 km MAIN NORTH LINE RAIL ALIGNMENT PLAN AND LONG SECTION ROAD 2 - SHEET 8 of 8	
		2 90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL	3.3.13 AGM	DRAFTING CHECK	ISSUE AUTHORISED	DATE		FILE No. QRN-E-0044-1111-1118.DWG	DRAWING NUMBER QRN-E-0044-1118	ISSUE 2
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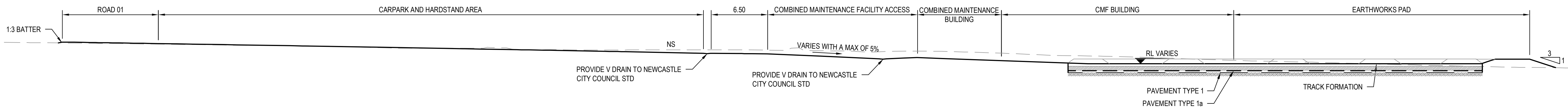
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Plotted by: Trish Vaughan

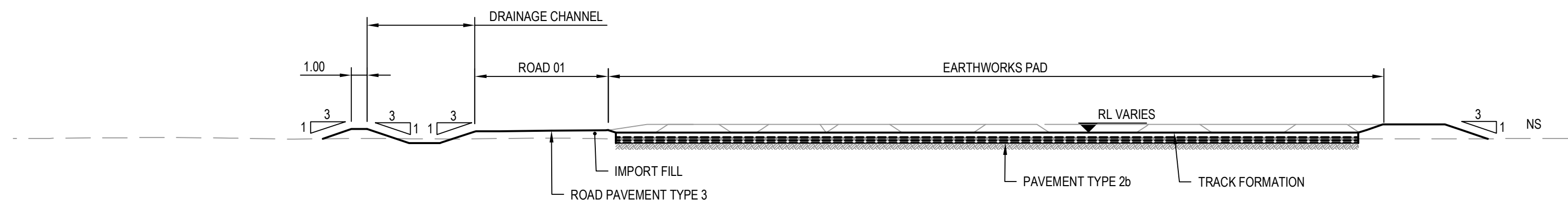
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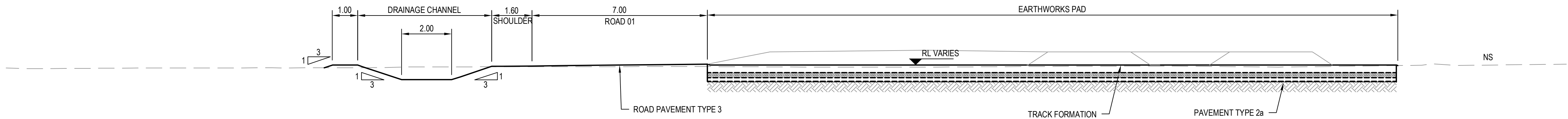
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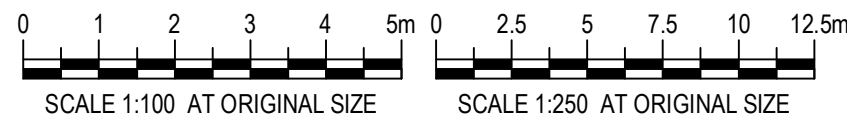
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TYPICAL SECTION
CH 176000
SCALE 1:250



TYPICAL SECTION
CH 176550



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2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION	P.P*	14.3.13



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PROJECT No. 22 16395
DRAWING No. QRN-E-0044-2050

DESIGNED	R. STEVENS	REVIEWED FOR AURIZON REQUIREMENTS
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DRAWN	R. COCKS	DESIGN MANAGER
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HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
EARTHWORKS
TYPICAL SECTIONS AND DETAILS - SHEET 1

FILE No. QRN-E-0044-2050.dwg

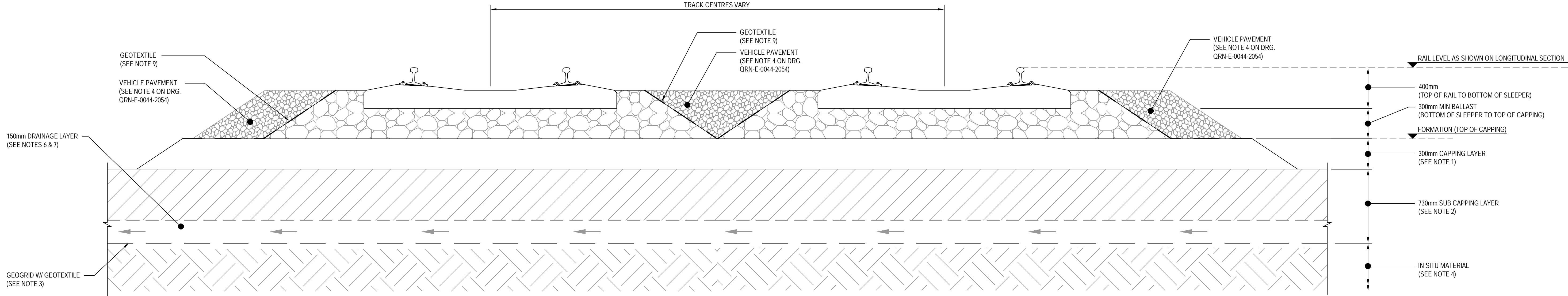
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QRN-E-0044-2050

ISSUE
2

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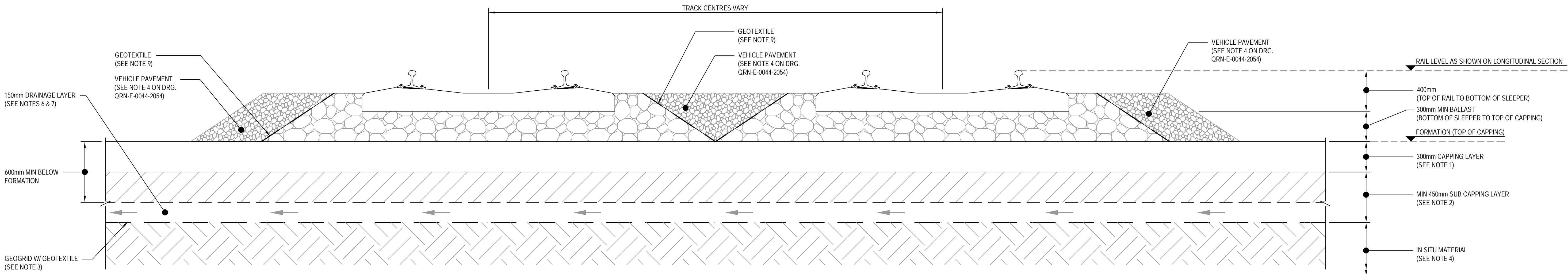
Plotted by: Nereah Evangelista

Plot Date: 15 March 2023 - 11:31 AM



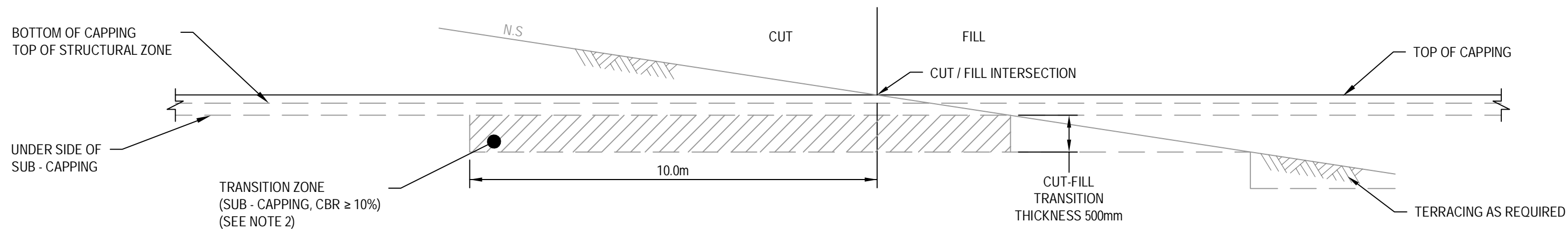
TYPE 1 - TYPICAL CROSS SECTION

SCALE 1:20



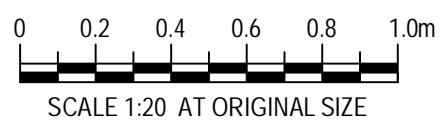
TYPE 3 - TYPICAL CROSS SECTION

SCALE 1:20



CUT TO FILL PAVEMENT TRANSITION TREATMENT

SCALE 1:100



NOTES:

- CAPPING LAYER:
 - DGB 20(HD) COMPACTED TO 98% SDD IN ACCORDANCE WITH QA SPECIFICATION 3051.
- SUB CAPPING LAYER:
 - SELECTED MATERIAL IMPORTED OR WON FROM SITE, WITH CBR ≥ 10 , WPI < 1200 WITH % PASSING 0.075 MIN SIEVE BETWEEN 15-30%.
- GEOGRID WITH GEOTEXTILE (BIDIM A39 AND TENSAR TX-160 OR SIMILAR).
- IN SITU MATERIAL TO BE AT LEAST CBR 3. IF IN SITU MATERIAL HAS A CBR < 3 BUT LARGER THAN 1, THEN 500mm OF POOR MATERIAL TO BE REMOVED AND REPLACED WITH SELECT FILL WITH CBR ≥ 10 , WPI < 1200 WITH % PASSING 0.075 MIN SIEVE BETWEEN 15-30%.
- VEHICLE PAVEMENTS TO BE CONSTRUCTED OF GRAVEL TO GRADING. REFER TO TABLE 1 ON DRG. QRN-E-0044-2054.
- DRAINAGE LAYER TO BE WRAPPED IN GEOTEXTILE FILTRATION CLASS VII STRENGTH CLASS D.
- DRAINAGE LAYER TO CONSIST OF MATERIAL AS PER DRG. QRN-E-0044-2054.
- FOR CBR < 1 , A SUITABLE GEOTECHNICAL SOLUTION TO BE PROPOSED BY A GEOTECHNICAL ENGINEER.
- GEOTEXTILE BIDIM A39 OR APPROVED EQUIVALENT.
- RAIL PAVEMENT OVER CICS IS TYPES 1A, 2A ACCORDINGLY (REFER TO DRG. QRN-E-0044-2056 TO 2058).
- RAIL PAVEMENT TYPES 1B, 2B, 3B APPLIES WHERE $> \text{CBR}-1$ (REFER TO DRG. QRN-E-0044-2056 AND 2058 FOR DETAILS).
- IN SITU MATERIAL CBR TO BE VERIFIED ON SITE BY THE CONTRACTOR AT 50m INTERVALS USING DCP.
- REFER TO DRG. QRN-E-0044-2001 TO 2009 FOR PAVEMENT TYPE LAYOUT.

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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS

1	FOR 90% PROJECT REVIEW	1.2.13	BT
2	FOR 90% DESIGN REVIEW FOR TRACK LOWERED OPTION	15.3.13	BT



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PROJECT No. _____

DRAWING No. _____

DESIGNED B.DENING

DESIGN CHECKED B.THOMAS

DRAWN N.EVANGELISTA

DRAFTING CHECK R.CASACLANG

APPROVED _____

DATE _____

REVIEWED FOR AURIZON REQUIREMENTS

DESIGN MANAGER DATE _____

ISSUE AUTHORISED _____

DATE _____

DATE _____



Aurizon Operations Ltd - ACN 124 649 967

HEXHAM TO TARRO
NSW LONG TERM TRAIN SUPPORT FACILITY
176.000 km MAIN NORTH LINE
TRACK FORMATION
TYPICAL SECTIONS - SHEET 1 OF 5

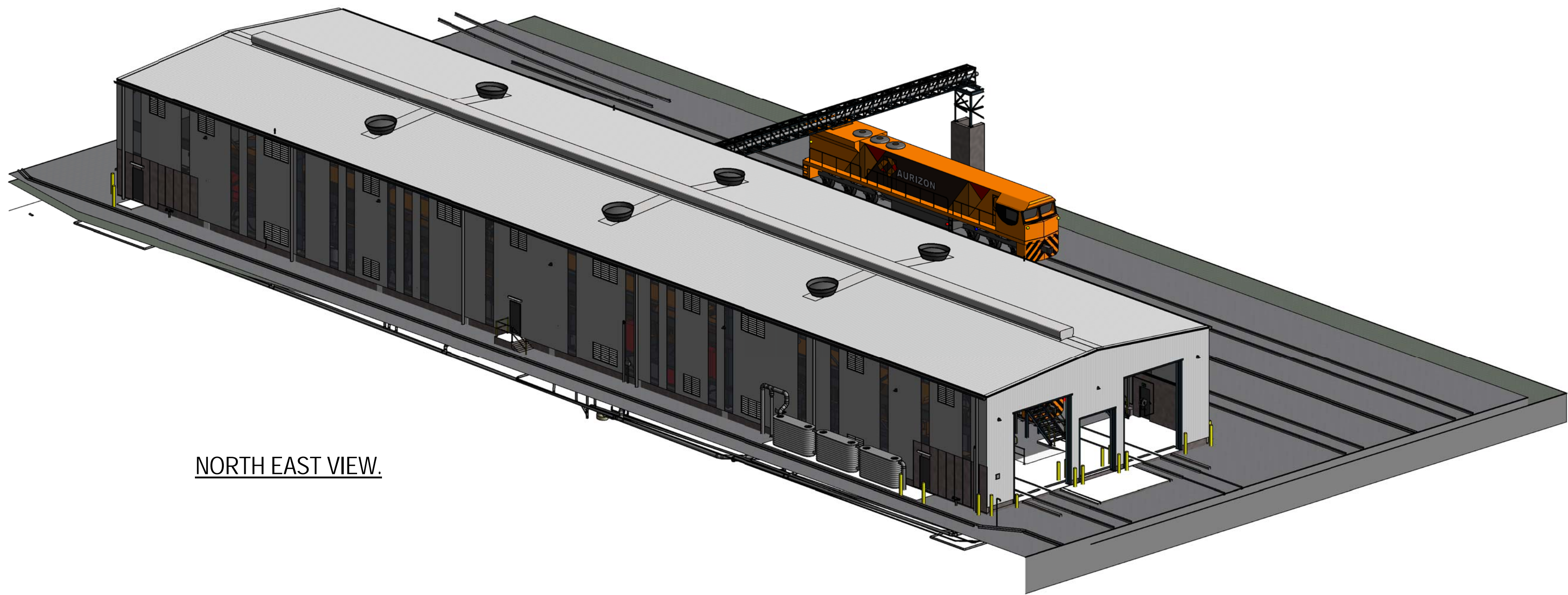
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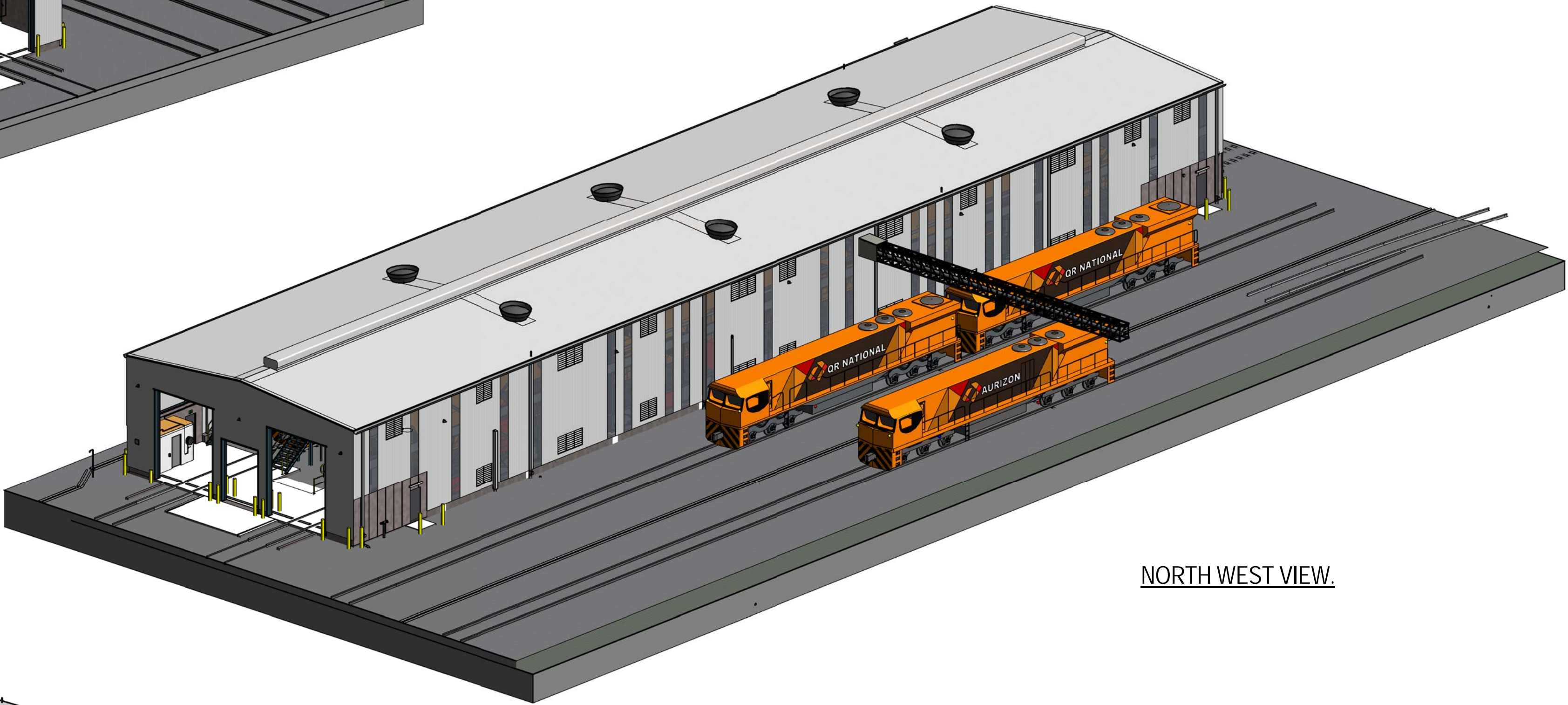
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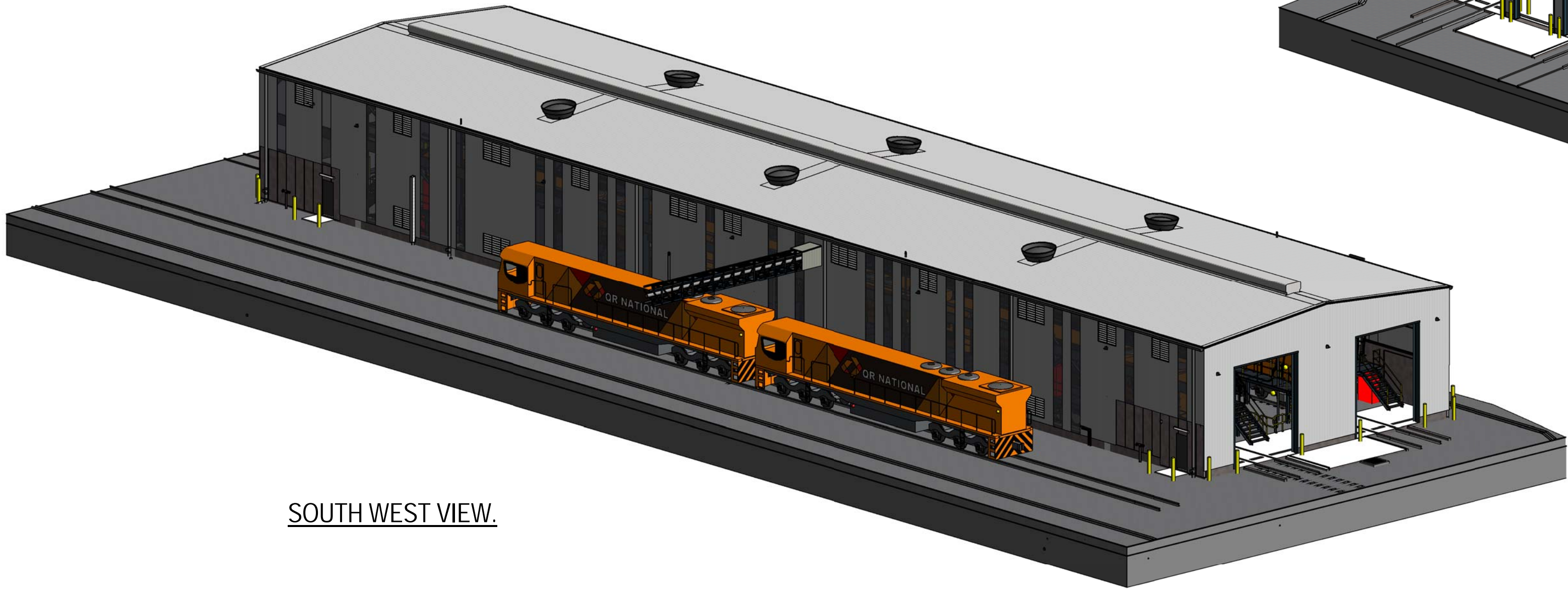
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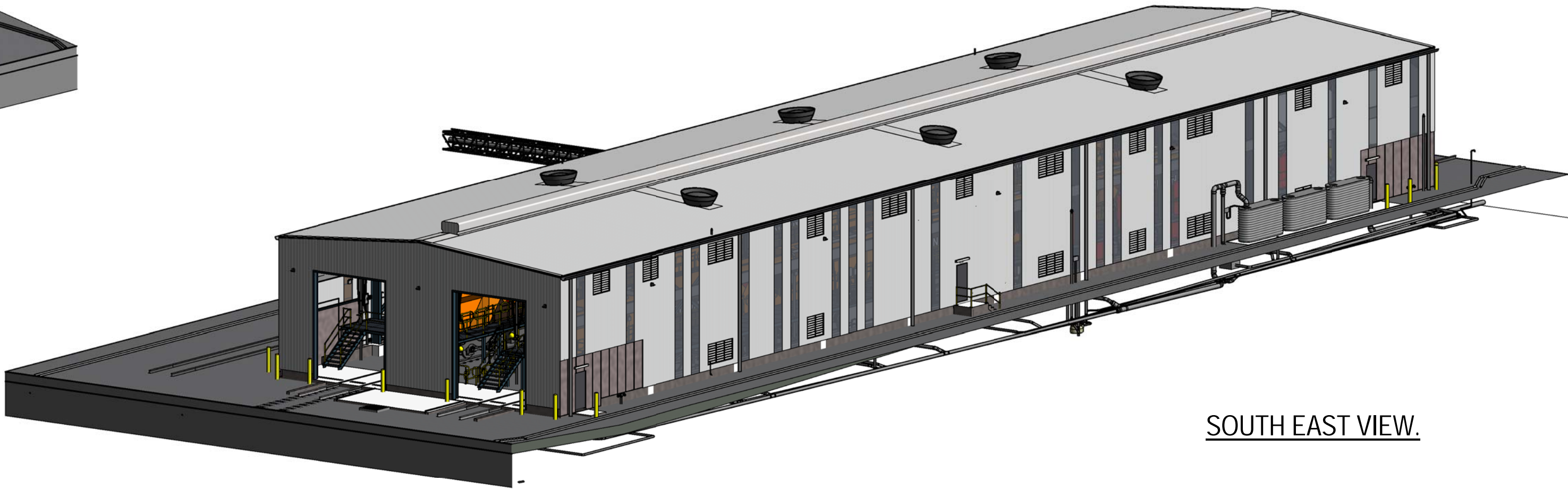
NORTH EAST VIEW.





NORTH WEST VIEW.



SOUTH WEST VIEW.



SOUTH EAST VIEW.

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	1	FOR 90% PROJECT REVIEW						HEXHAM TO TARRO		DRAWING NUMBER	
	2	90% DESIGN REVIEW FOR TRACK LOWERED OPTION - GENERAL REVISION						NSW LONG TERM TRAIN SUPPORT FACILITY		ISSUE	
								176.00 km MAIN NORTH LINE		QRN-E-0044-6005	
SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWINGS							PROVISIONING FACILITY - ARCHITECTURE		IMAGES - SHEET 1		2