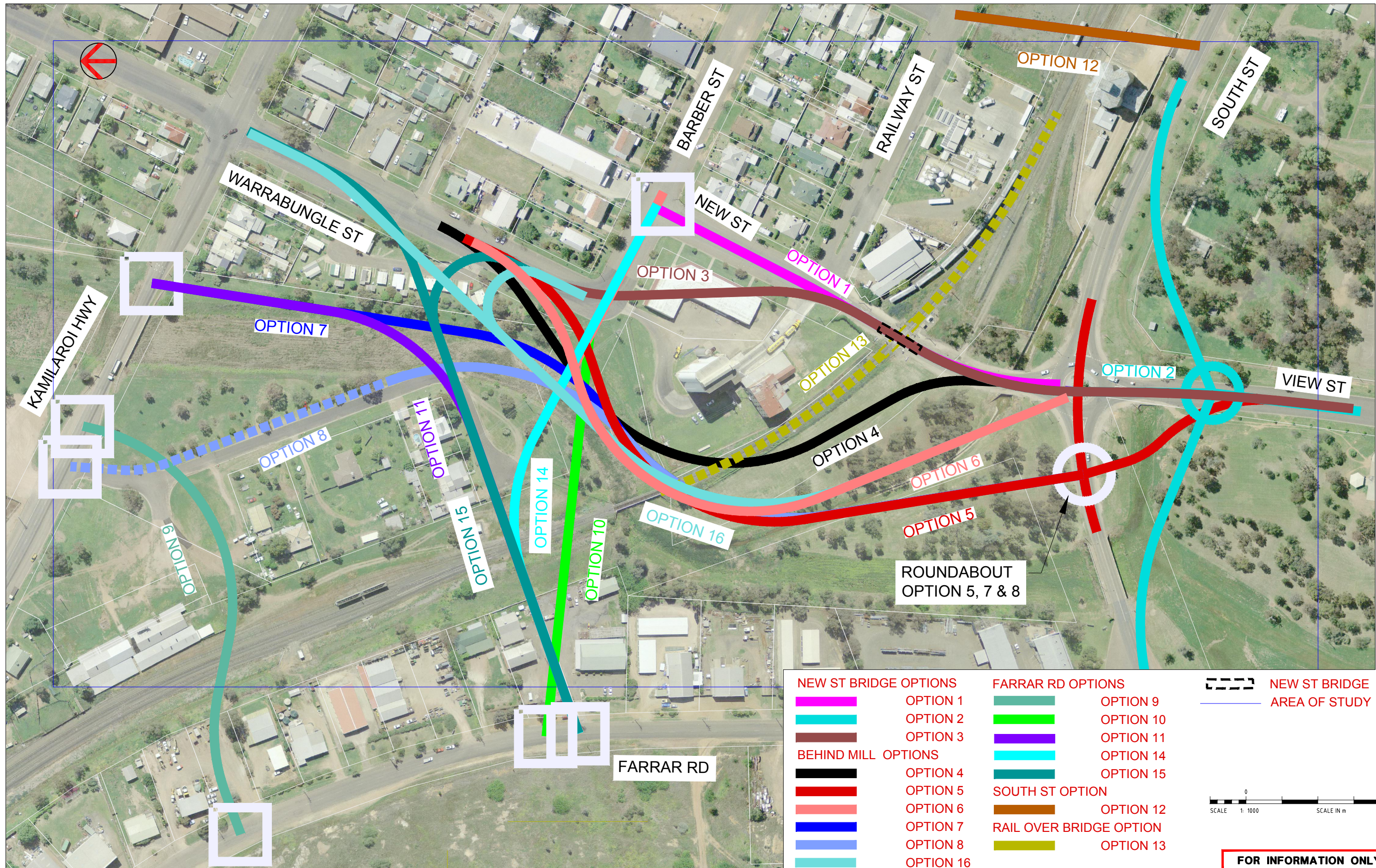


© Kellogg Brown & Root DATE: Wednesday, 27 February 2013 10:53:28 AM FILE: 0:\BBS\PROJECTS\SEC143 - GUNNEDAH ROAD OVER RAIL 2 DESIGN WORKING\CIVIL SKETCHES\SEC143-SKH-PRE-1000.DWG



NEW ST BRIDGE OPTIONS	FARRAR RD OPTIONS	NEW ST BRIDGE AREA OF STUDY
OPTION 1	OPTION 9	AREA OF STUDY
OPTION 2	OPTION 10	
OPTION 3	OPTION 11	
BEHIND MILL OPTIONS	OPTION 14	
OPTION 4	OPTION 15	
OPTION 5	SOUTH ST OPTION	
OPTION 6	OPTION 12	
OPTION 7	RAIL OVER BRIDGE OPTION	
OPTION 8	OPTION 13	
OPTION 16		






SCALE 1:1000 SCALE IN m

FOR INFORMATION ONLY




REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

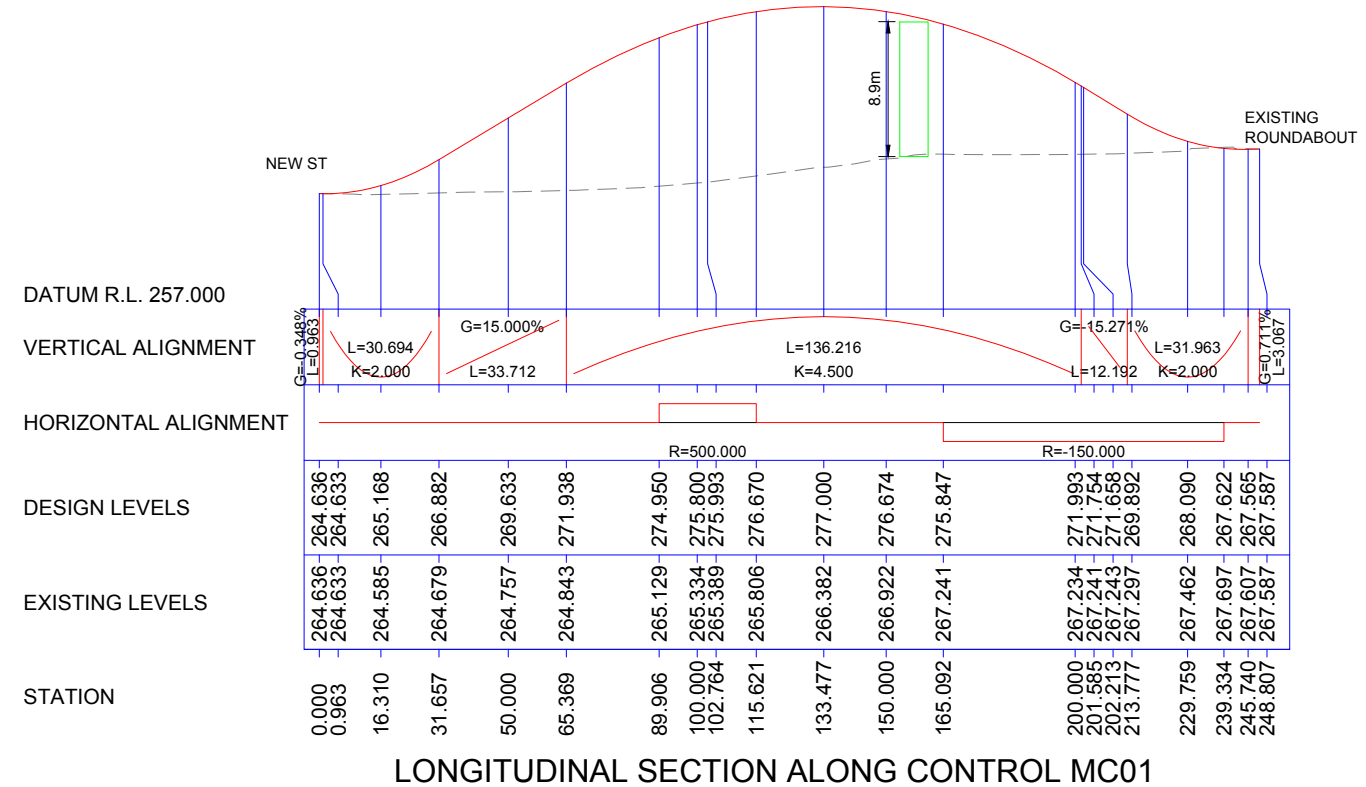
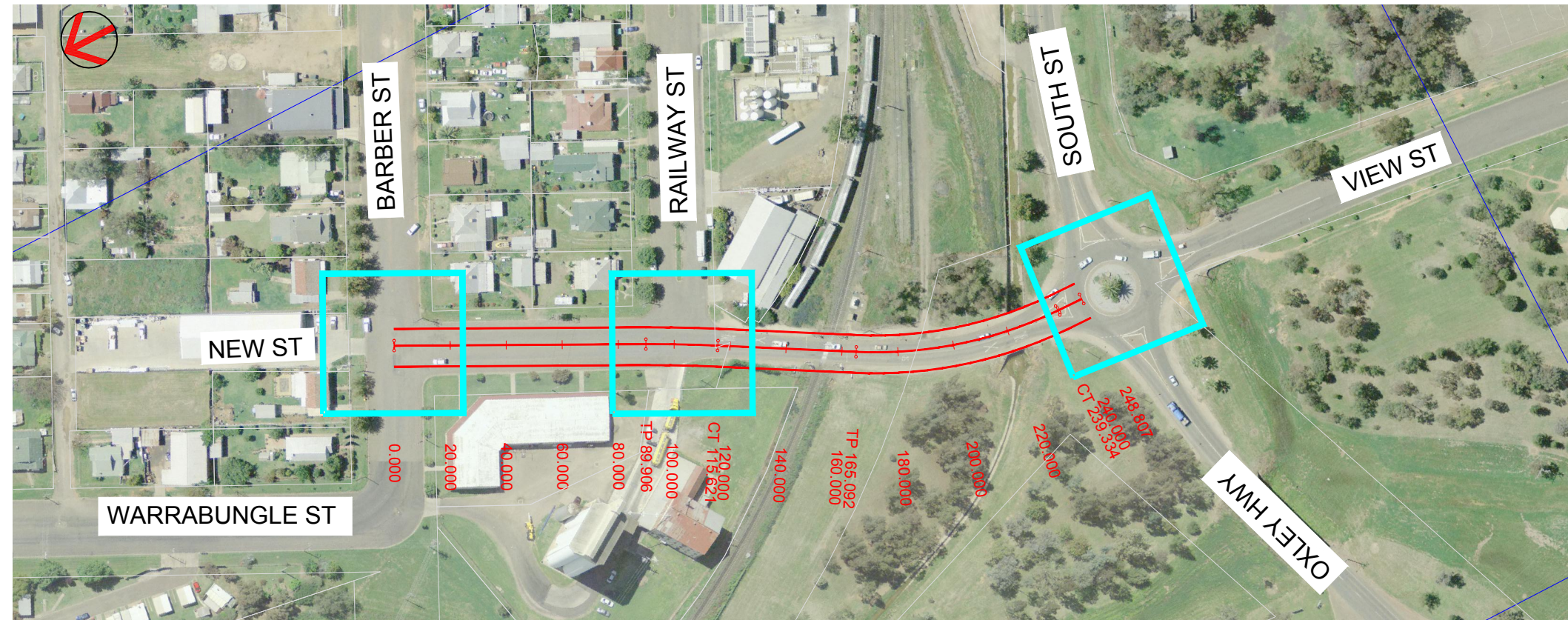
Kellogg Brown & Root Pty Ltd Kellogg Brown & Root Pty Ltd ABN 91 007 660 317		TITLE GUNNEDAH SECOND ROAD OVER RAIL BRIDGE PRELIMINARY OPTIONS SKETCH GENERAL ARRANGEMENT	
DRAWING SCALE AS SHOWN DRAFTER:	ORIG. SIZE A1	DRAWING No. SEC143-SKH-PRE-1000	REVISION B

LEGEND - PLAN

-  INTERSECTION TREATMENT TO BE DETERMINED
-  PROPOSED ALIGNMENT
-  REALIGNMENT OF EXISTING ROADS TO SUIT
-  AREA OF STUDY
-  ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

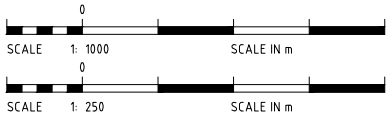
-  DESIGN SURFACE
-  EXISTING SURFACE
-  MINIMUM VERTICAL CLEARANCE ENVELOPE



LONGITUDINAL SECTION ALONG CONTROL MC01

NOTES


1. THE LOCATION OF THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE MAINTAINED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

Kellogg Brown & Root Pty Ltd



Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317

TITLE

GUNNDAH SECOND ROAD OVER RAIL BRIDGE

PRELIMINARY OPTIONS SKETCH

OPTION 1A

DRAWING SCALE

AS SHOWN

DRAFTER:

ORIG. SIZE

A1

DRAWING No.

SEC143-SKH-PRE-1001

REVISION

B

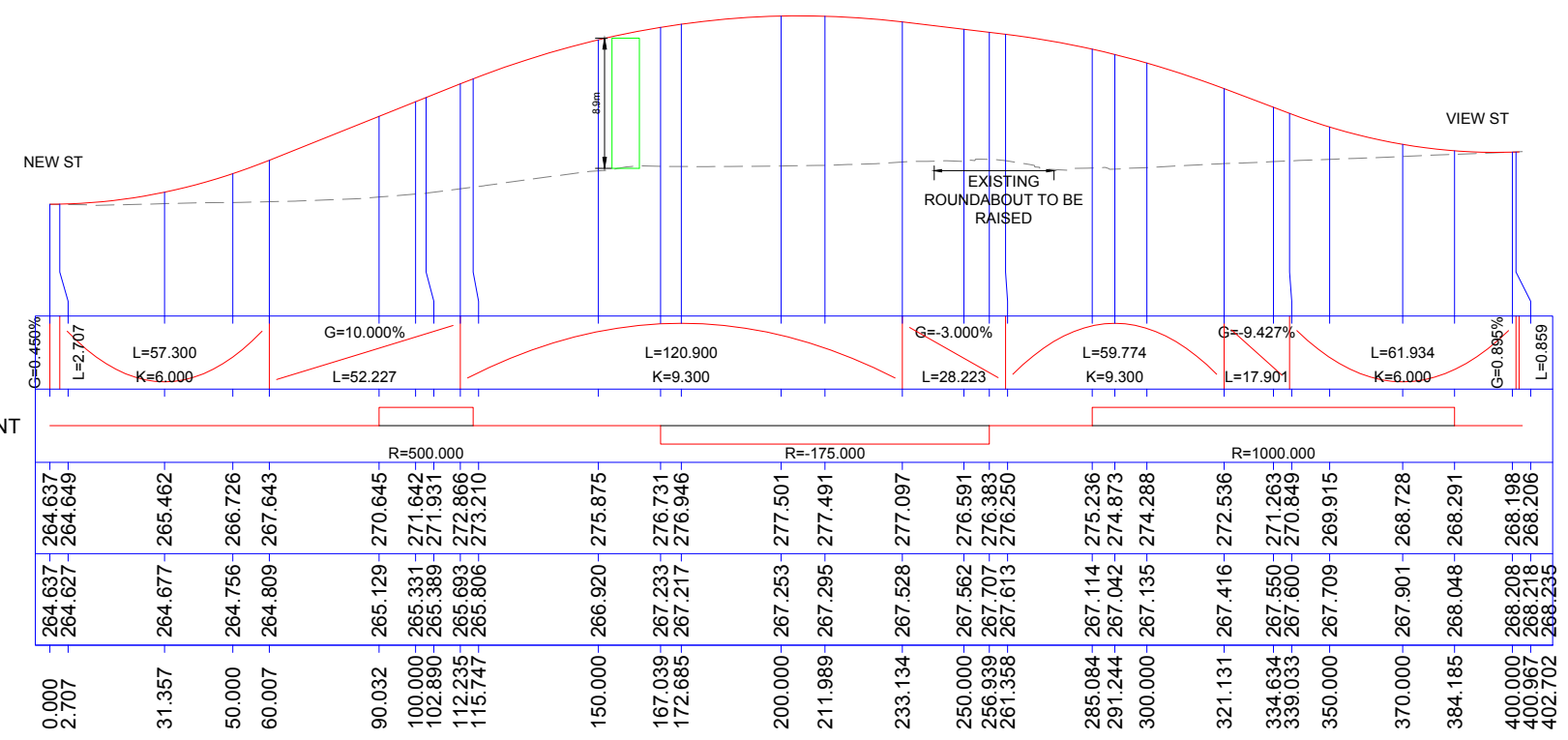
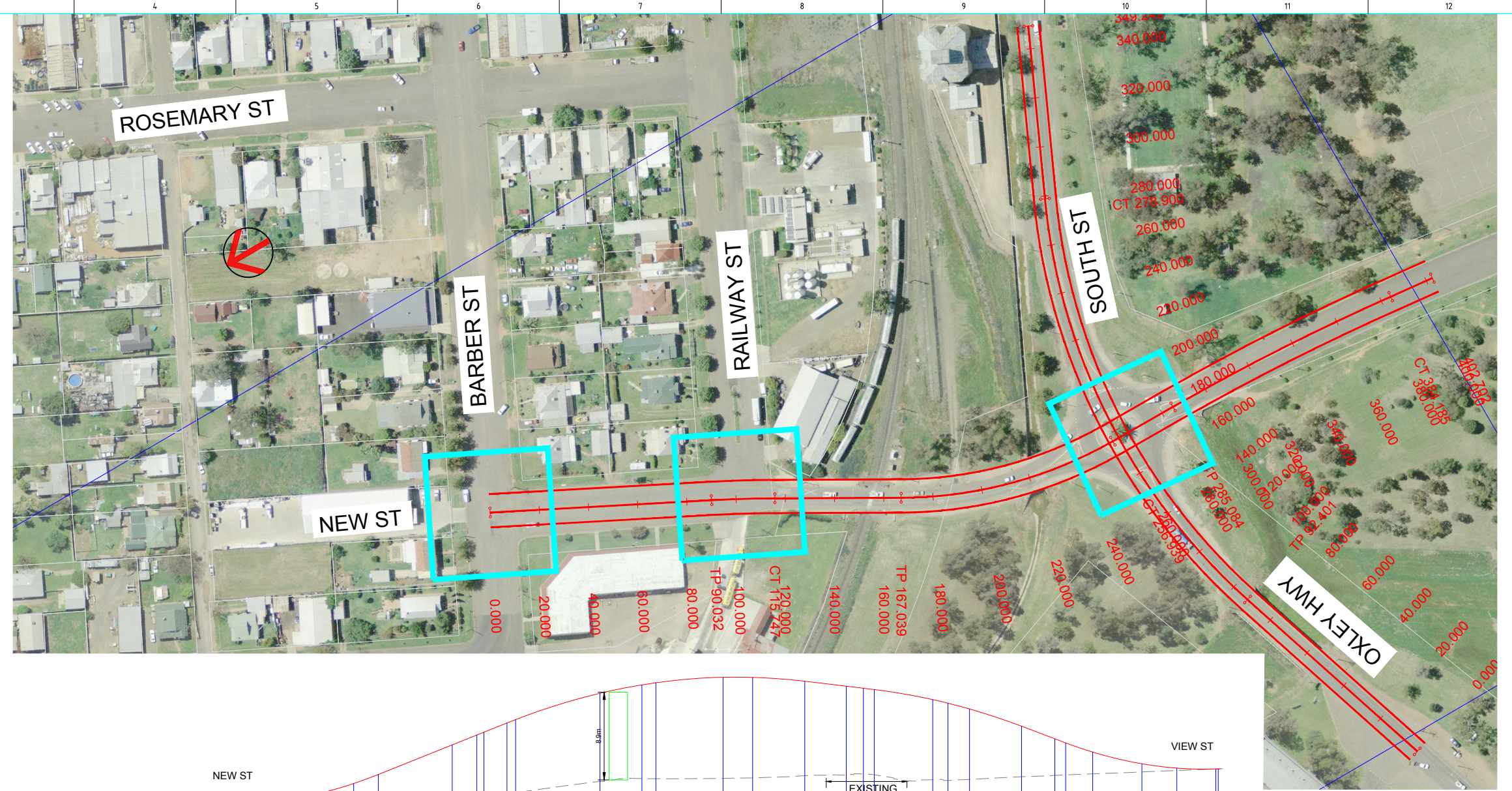
© Kellogg Brown & Root DATE: Wednesday, 27 February, 2013 11:00:09 AM FILE: O:\BRS\PROJECTS\SEC143-SKH-PRE-1017.DWG

LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE



DATUM R.L. 257.000

VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

DESIGN LEVELS

EXISTING LEVELS

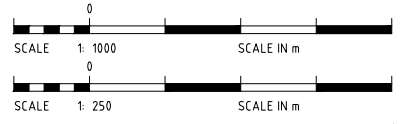
STATION

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264.637	264.627	264.649	265.462	266.726	267.643	270.645	271.642	271.931	272.866	273.210	275.875	276.731	276.946	277.501	277.491	277.097	276.591	276.383	276.250	275.236	274.873	274.288	272.536	271.263	270.849	269.915	268.728	268.291	268.198	268.206	268.235
264.637	264.627	264.677	264.756	264.809	265.129	265.331	265.389	265.693	265.806	266.920	267.233	267.217	267.253	267.295	267.528	267.562	267.707	267.613	267.114	267.042	267.135	267.416	267.550	267.600	267.709	267.901	268.048	268.208	268.218	268.235	

LONGITUDINAL SECTION ALONG CONTROL MC01 B

NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RAISED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
3. REFER TO SEC143-SKH-PRE-1021 FOR LONGITUDINAL SECTION OF OXLEY HWY.



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013			
A	ISSUED FOR DISCUSSION	05.02.2013	CLIENT		

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 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

DRAWING SCALE: **AS SHOWN**
 DRAFTER:






TITLE: **GUNNDAH SECOND ROAD OVER RAIL BRIDGE**
PRELIMINARY OPTIONS SKETCH
OPTION 1B

DRAWING No: **SEC143-SKH-PRE-1017**




ORIG. SIZE: **A1**

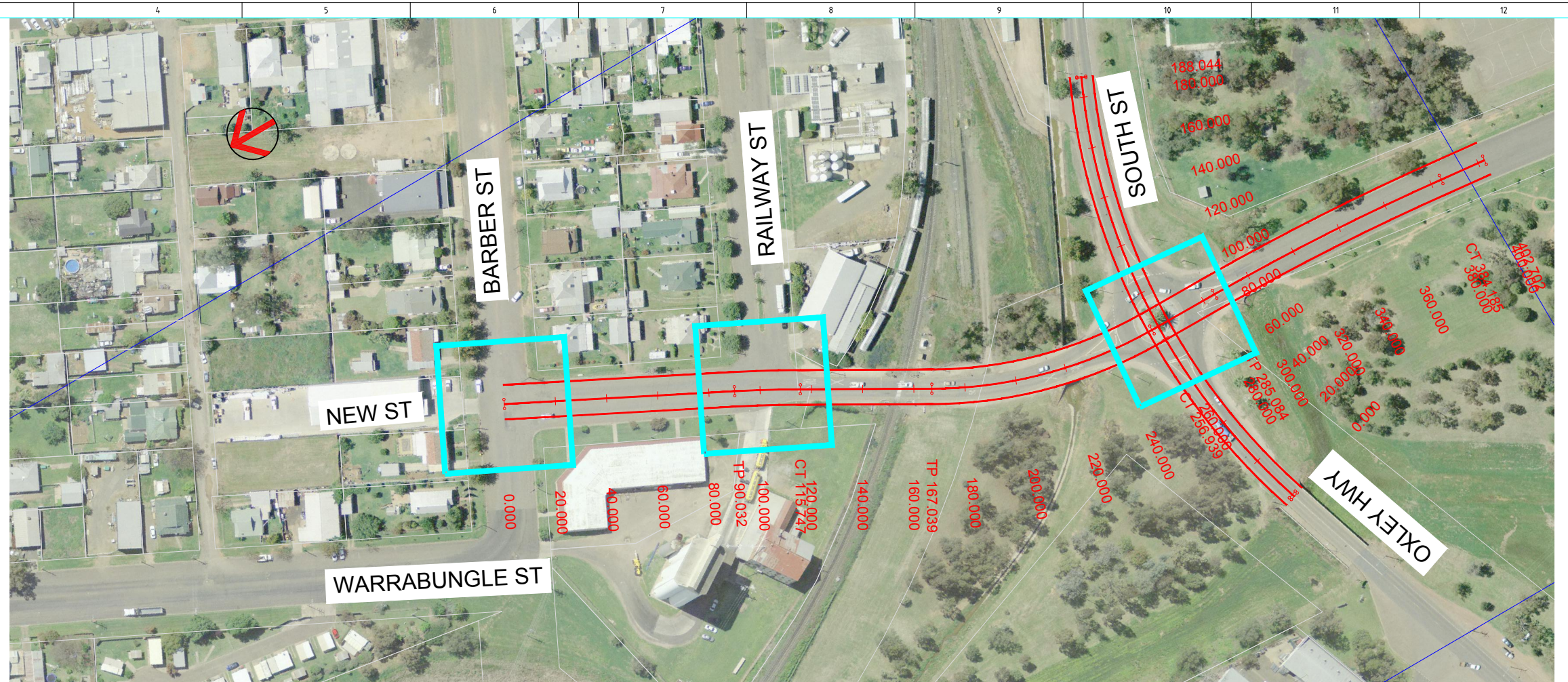
REVISION: **C**

LEGEND - PLAN

-  INTERSECTION TREATMENT TO BE DETERMINED
-  PROPOSED ALIGNMENT
-  REALIGNMENT OF EXISTING ROADS TO SUIT
-  AREA OF STUDY
-  ROAD UPGRADE REQUIRED FOR HML ROUTE

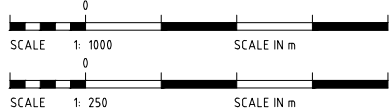
LEGEND - LONGITUDINAL SECTION

-  DESIGN SURFACE
-  EXISTING SURFACE
-  MINIMUM VERTICAL CLEARANCE ENVELOPE



NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RAISED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
3. REFER TO SEC143-SKH-PRE-1021 FOR LONGITUDINAL SECTION OF OXLEY HWY.



DATUM R.L. 257.000

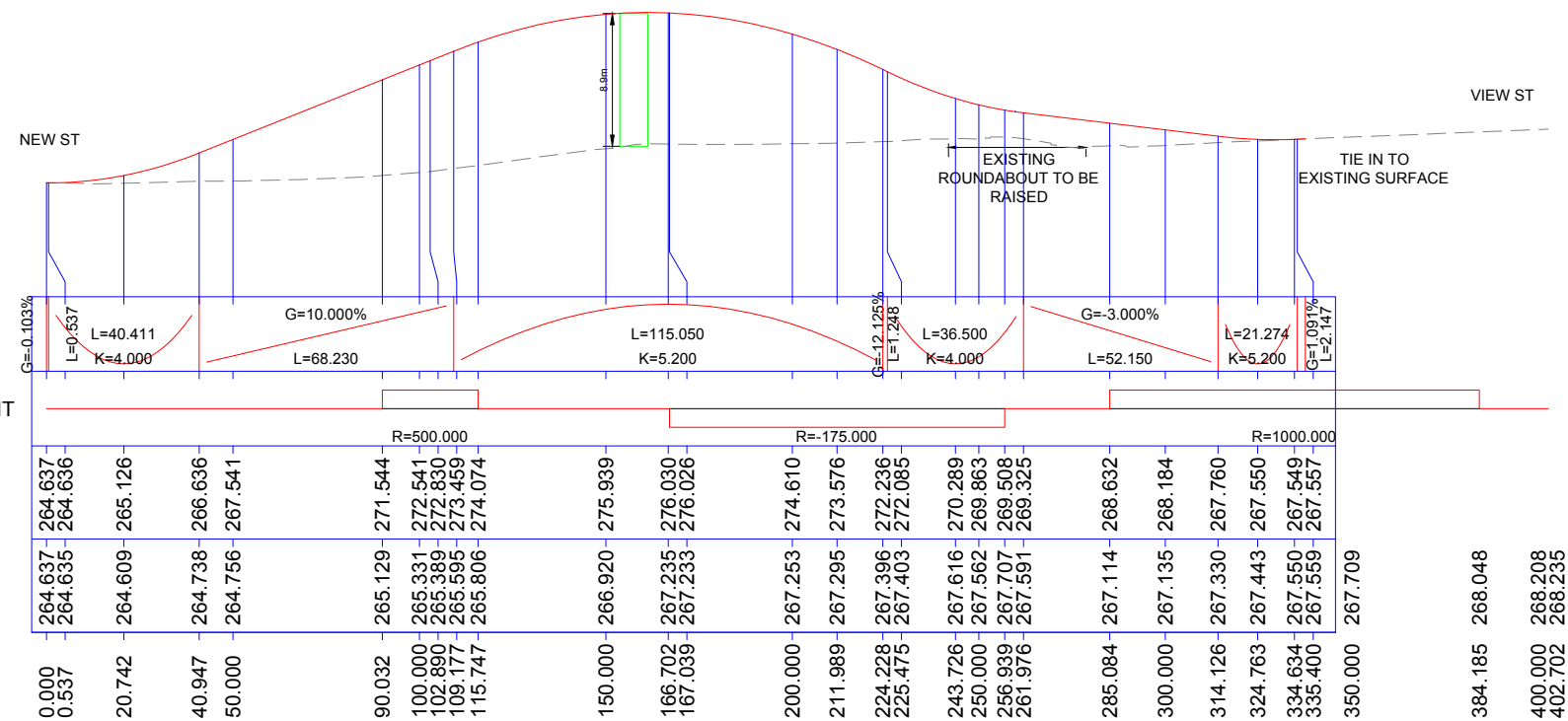
VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

DESIGN LEVELS

EXISTING LEVELS

STATION



LONGITUDINAL SECTION ALONG CONTROL MC01 C

FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	05.02.2013			

Kellogg Brown & Root Pty Ltd
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TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 1C - 50km/h DESIGN SPEED






DRAWING SCALE
AS SHOWN

ORIG. SIZE
A1




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SEC143-SKH-PRE-1018

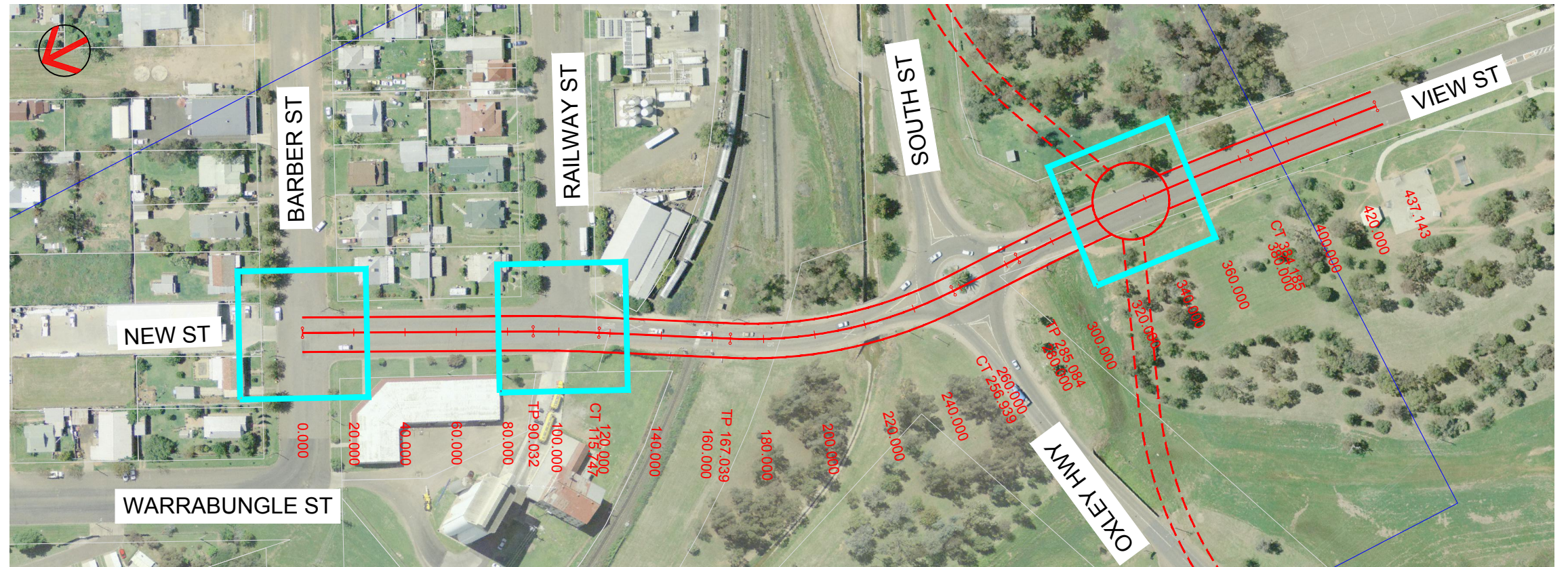
REVISION
C

LEGEND - PLAN

-  INTERSECTION TREATMENT TO BE DETERMINED
-  PROPOSED ALIGNMENT
-  REALIGNMENT OF EXISTING ROADS TO SUIT
-  AREA OF STUDY
-  ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

-  DESIGN SURFACE
-  EXISTING SURFACE
-  MINIMUM VERTICAL CLEARANCE ENVELOPE



NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RELOCATED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.

DATUM R.L. 257.000

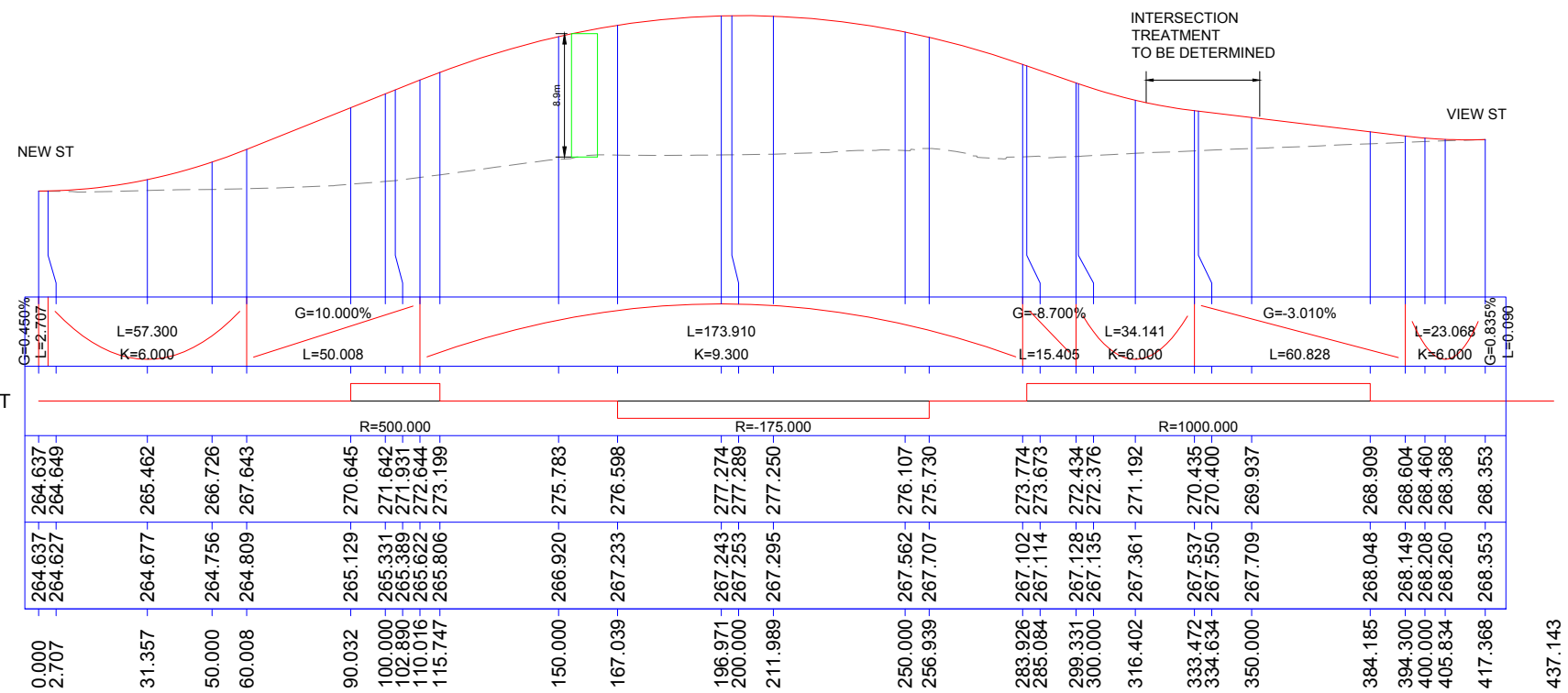
VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

DESIGN LEVELS

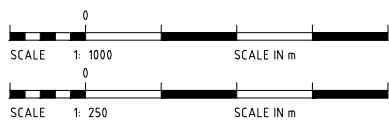
EXISTING LEVELS

STATION



LONGITUDINAL SECTION ALONG CONTROL MC02

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

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 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
 GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 2

DRAWING SCALE
 AS SHOWN
 DRAFTER:

ORIG. SIZE
 A1

DRAWING No.
 SEC143-SKH-PRE-1002

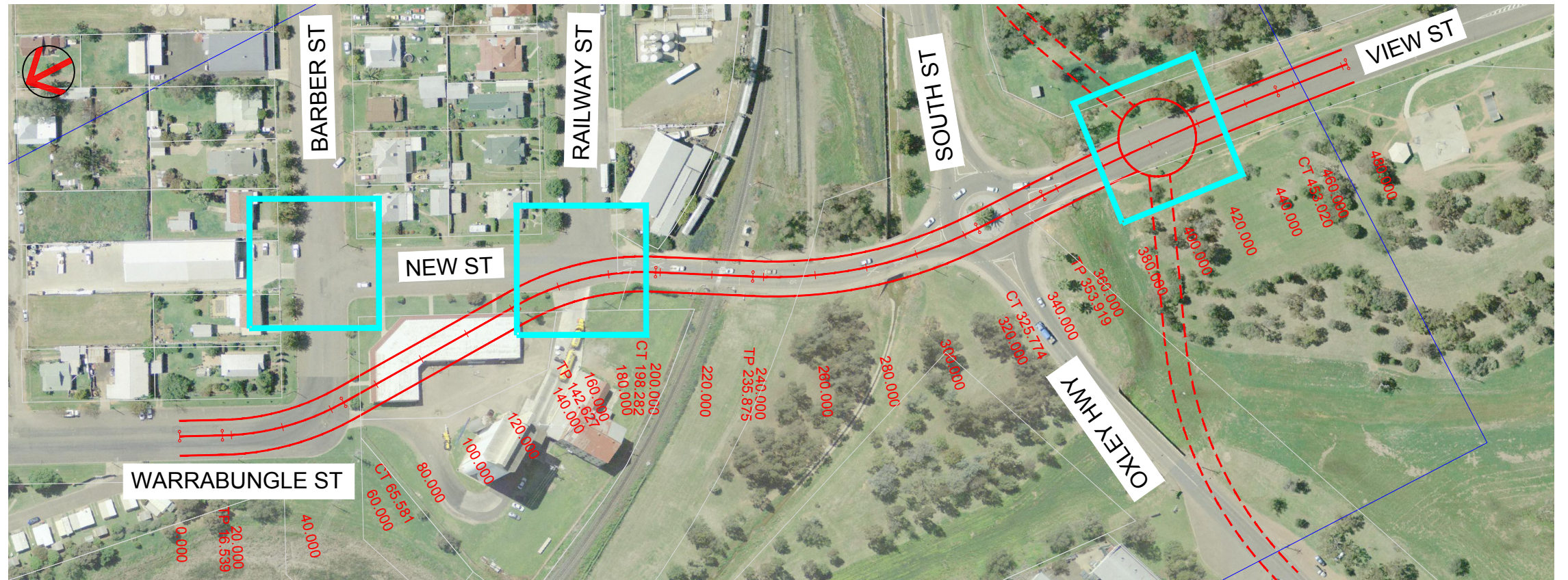
REVISION
 B

LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE



NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RELOCATED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.

DATUM R.L. 256.000

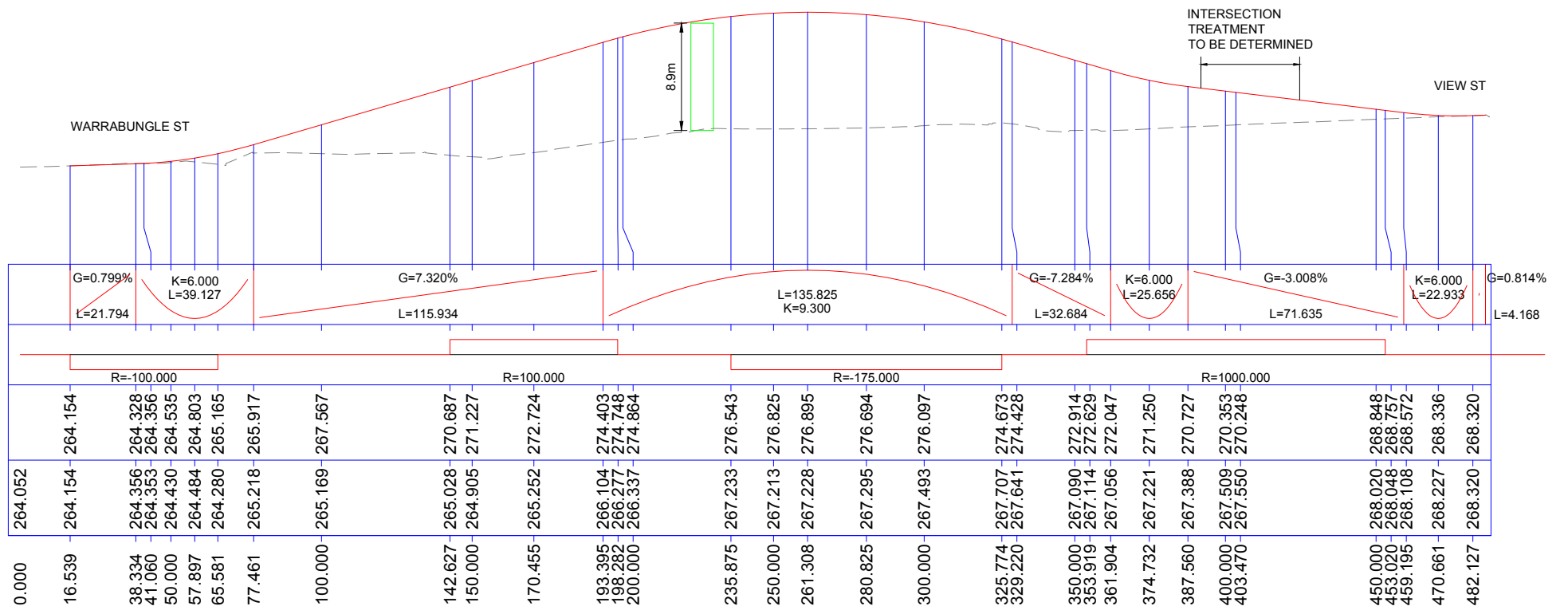
VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

DESIGN LEVELS

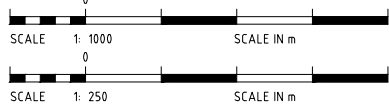
EXISTING LEVELS

STATION



LONGITUDINAL SECTION ALONG CONTROL MC03

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
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			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

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 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 3

DRAWING SCALE
AS SHOWN

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1003

REVISION
C

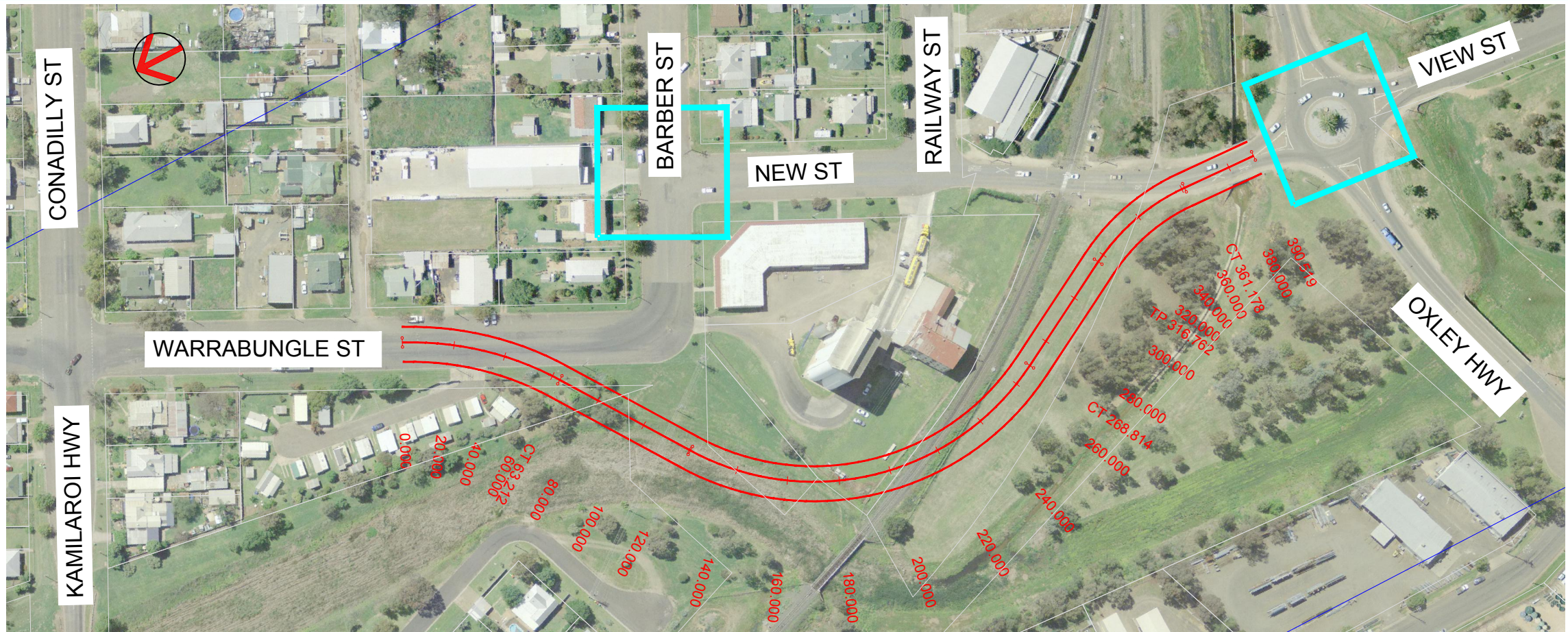
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LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

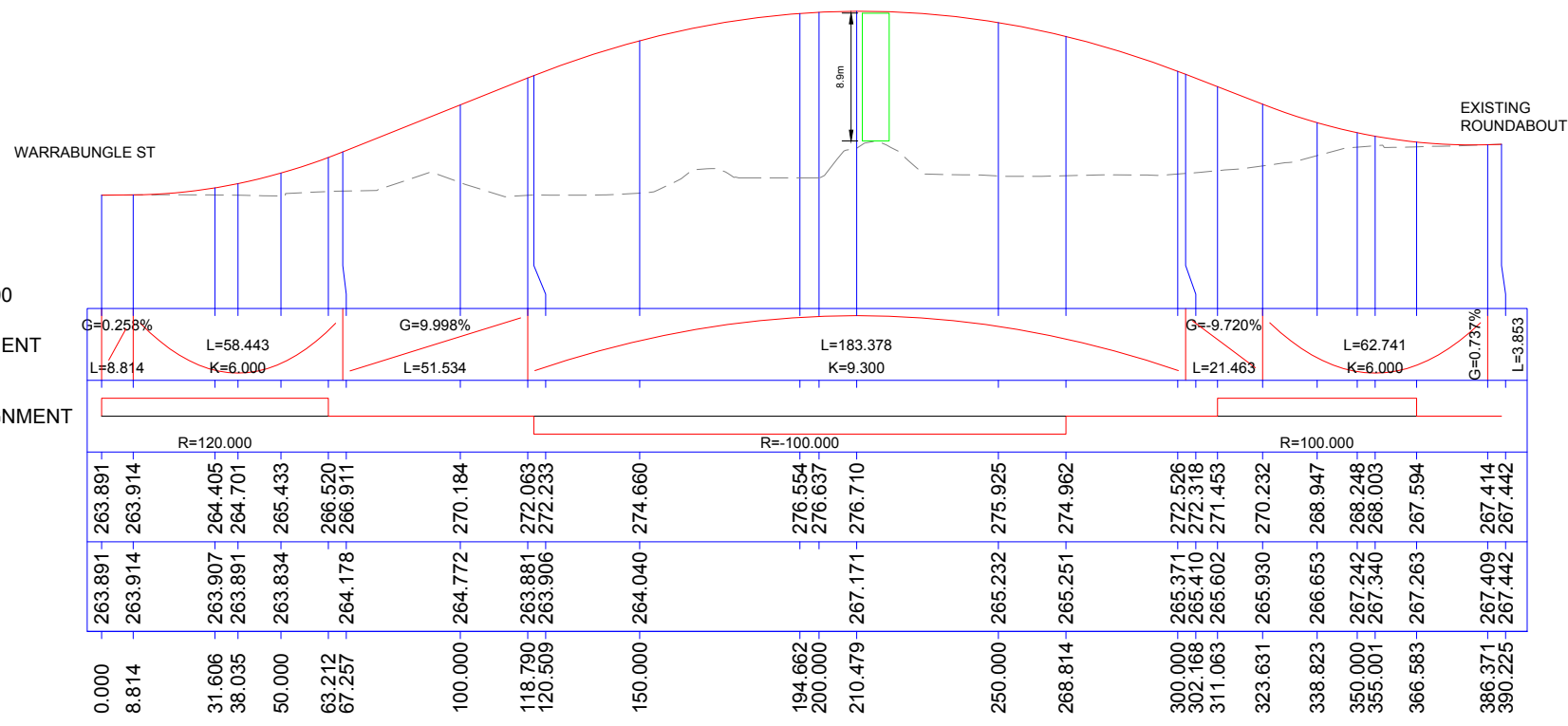
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

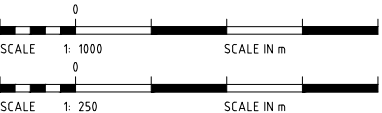


NOTES

1. THE LOCATION OF THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE MAINTAINED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC04



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013			
A	ISSUED FOR DISCUSSION	23.01.2013	CLIENT		

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

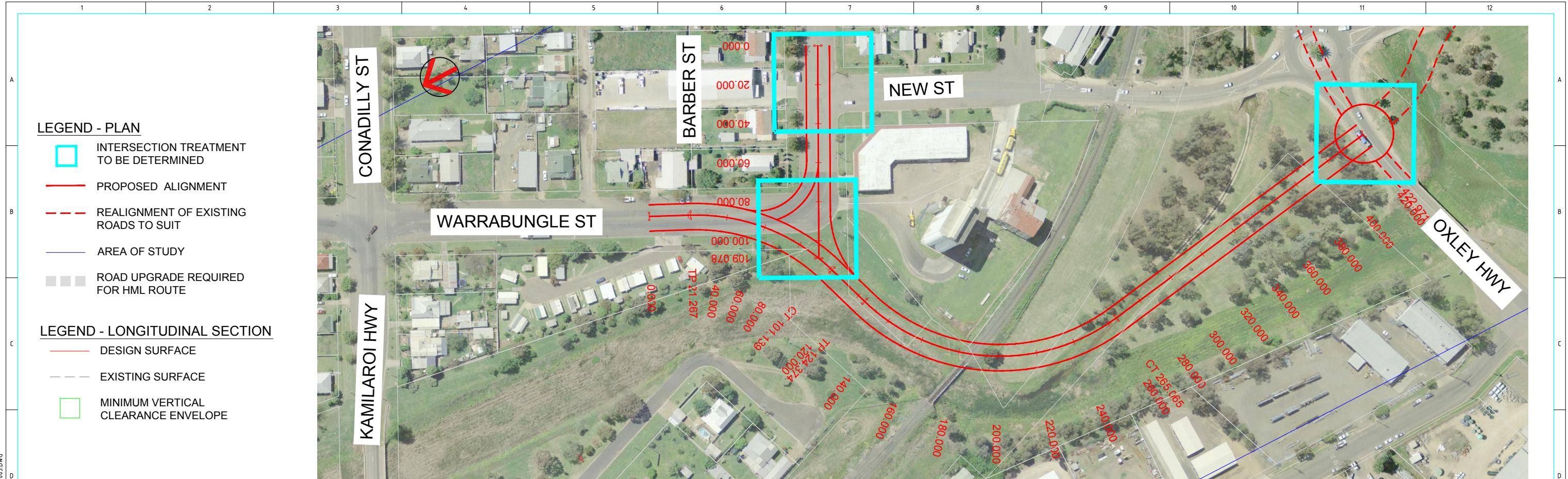
TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 4

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1

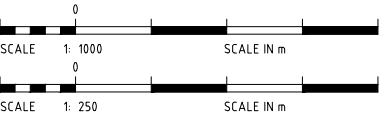
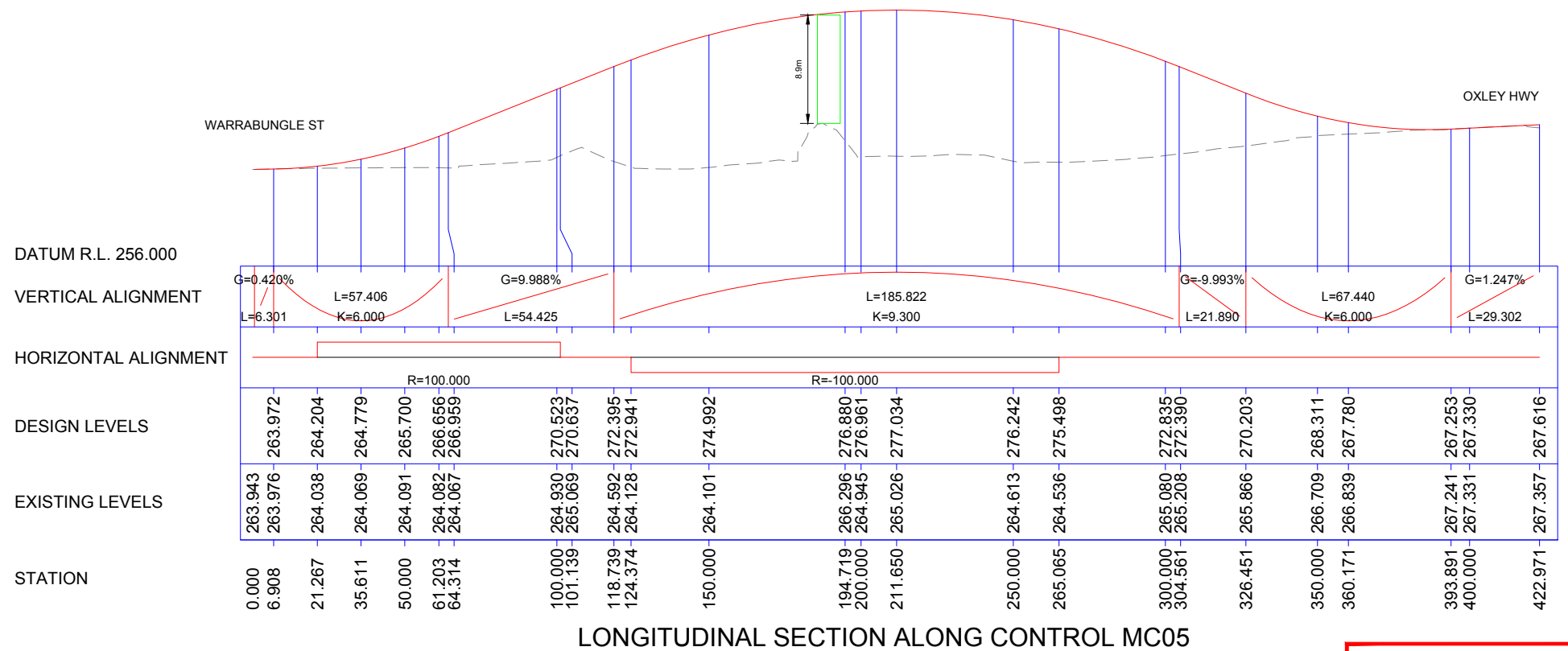
DRAWING No.
SEC143-SKH-PRE-1004

REVISION
C



NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RELOCATED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
3. REFER TO SEC143-SKH-1015 FOR BARBER ST CONNECTION TO PROPOSED ALIGNMENT.



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
B	ISSUED FOR DISCUSSION	08.02.2013			
A	ISSUED FOR DISCUSSION	23.01.2013			

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 ABN 91 007 660 317

TITLE
 GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY SKETCH
 OPTION 5

DRAWING SCALE
 AS SHOWN

ORIG. SIZE
 A1

DRAWING No.
 SEC143-SKH-PRE-1005

REVISION
 C

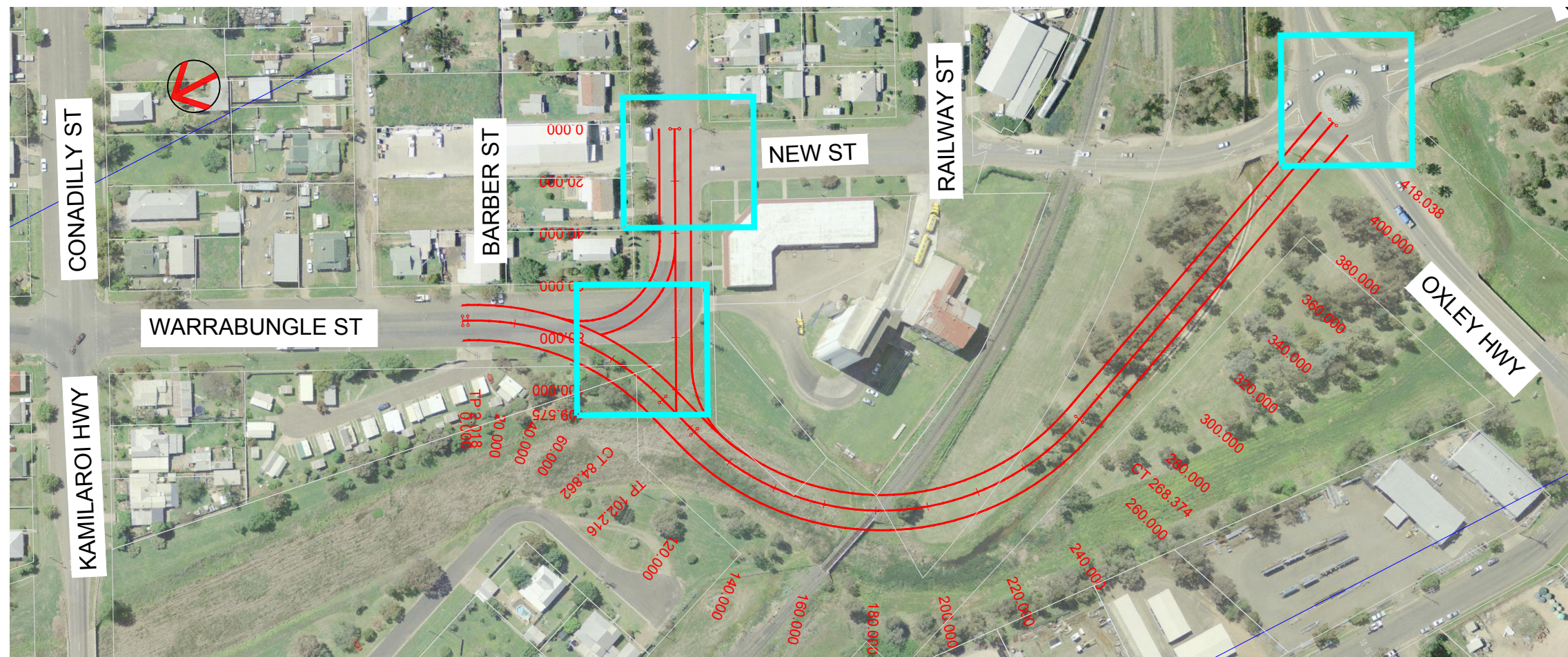
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LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

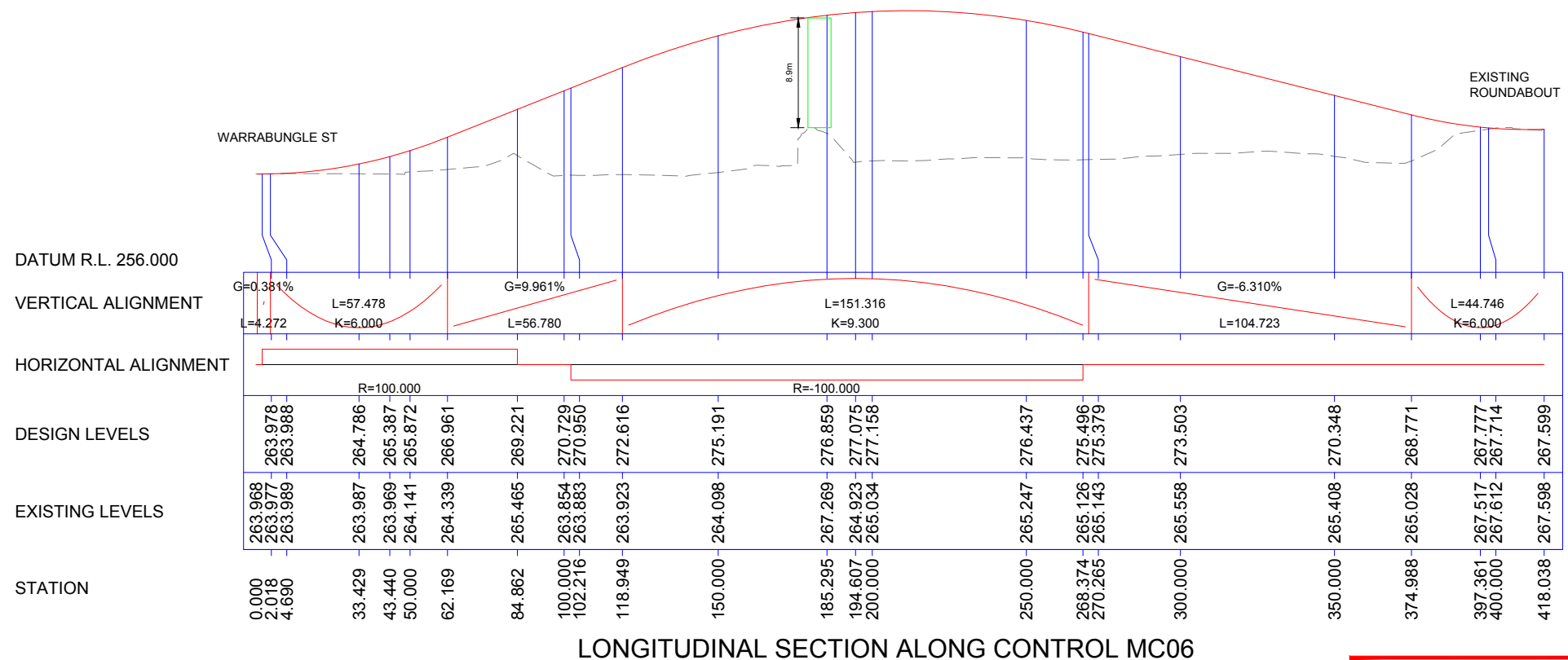
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE



NOTES

1. THE LOCATION OF THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE MAINTAINED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75M.
3. REFER TO SEC143-SKH-1015 FOR BARBER ST CONNECTION TO PROPOSED ALIGNMENT.



LONGITUDINAL SECTION ALONG CONTROL MC06

FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 6

DRAWING SCALE
AS SHOWN
 DRAFTER:

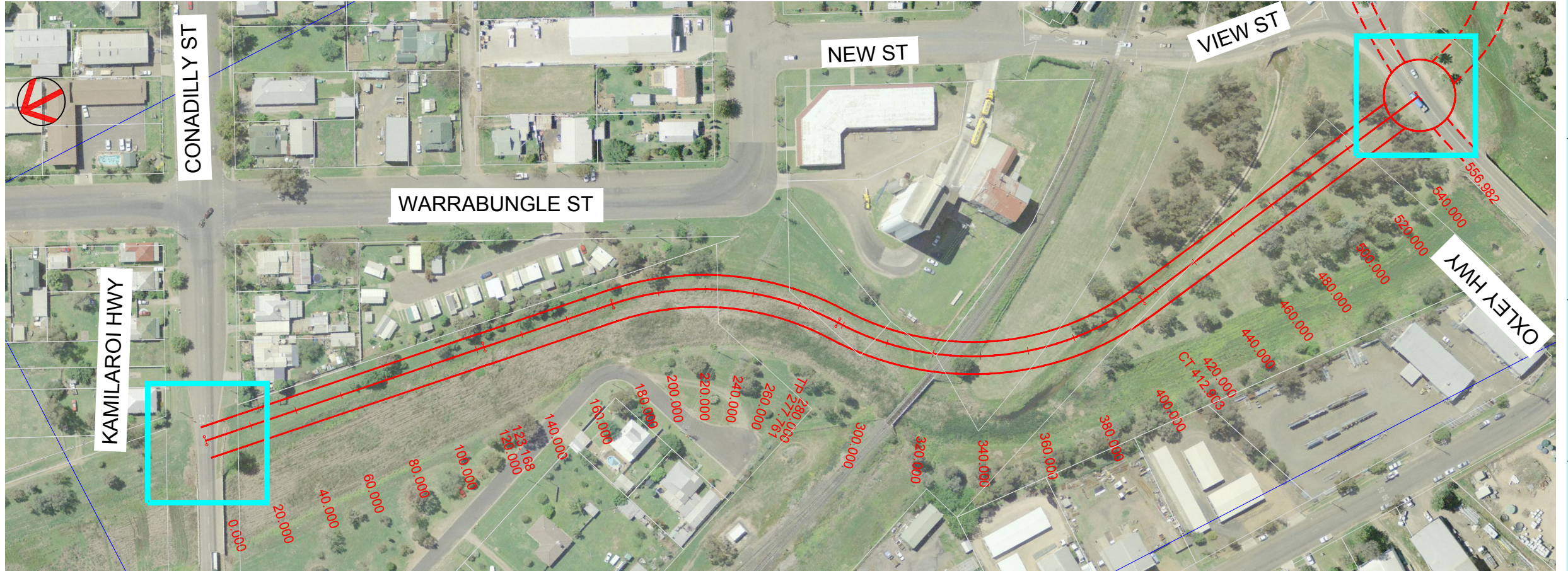
ORIG. SIZE
A1
 DRAWING No.
SEC143-SKH-PRE-1006
 REVISION
B

LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

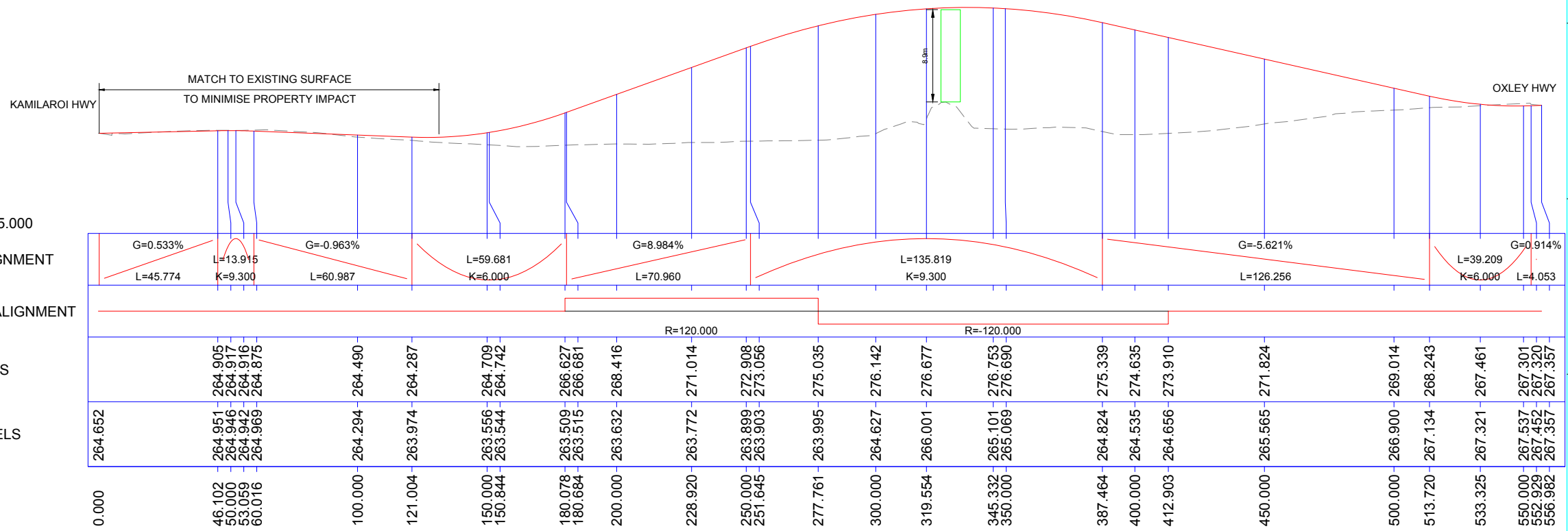
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE



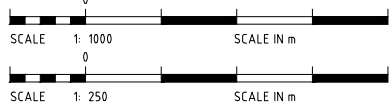
NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RELOCATED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC07

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	DRAFTING	M.KANG	
B	ISSUED FOR DISCUSSION	08.02.2013	DESIGN	M.KANG	
A	ISSUED FOR DISCUSSION	23.01.2013	DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
			CLIENT		

Kellogg Brown & Root Pty Ltd
KBR
 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 7

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1007

REVISION
C

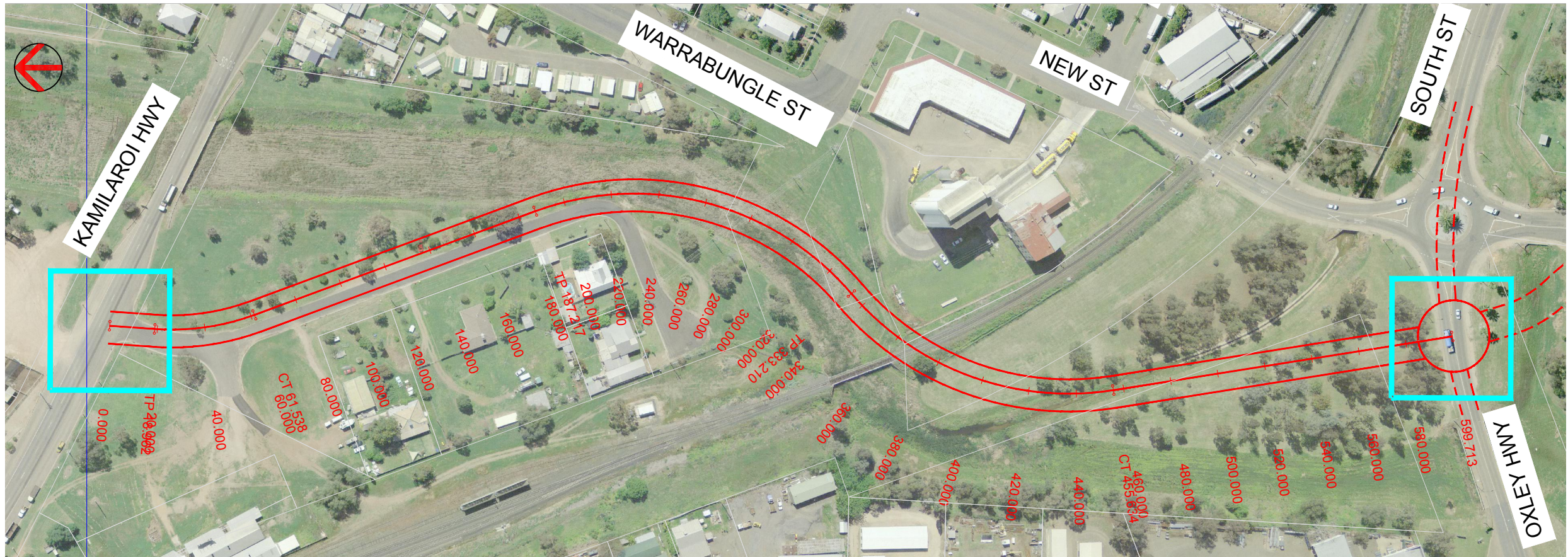
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LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

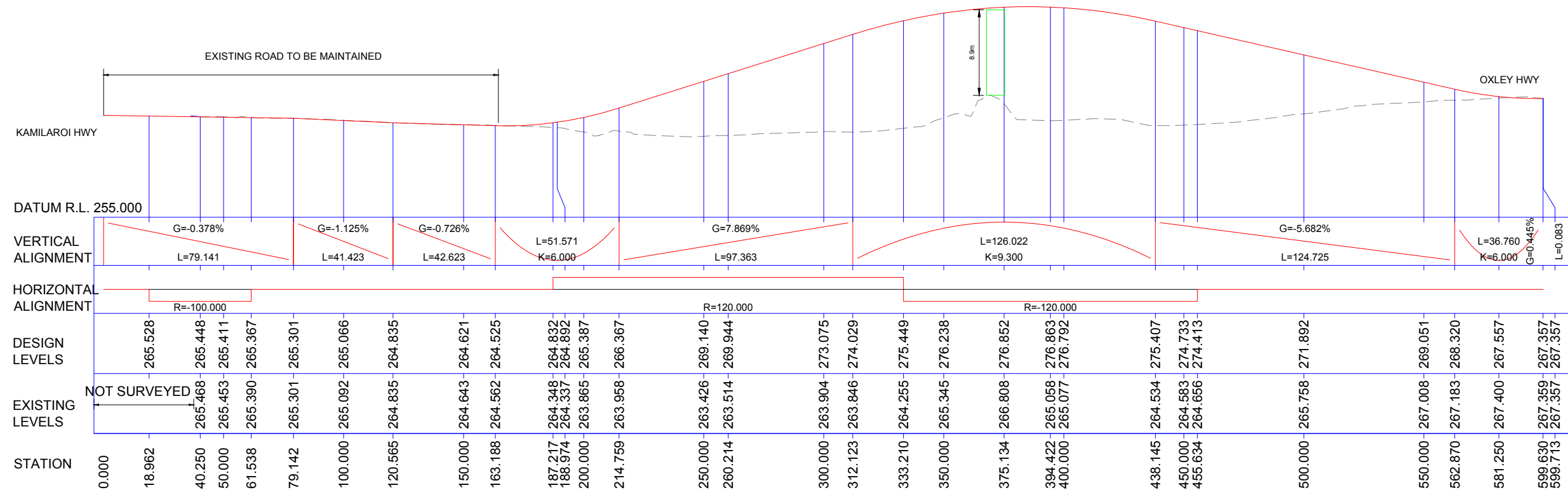
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE



NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE RELOCATED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC08

FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013	CLIENT		

Kellogg Brown & Root Pty Ltd

KBR

Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317

TITLE

GUNNDAH SECOND ROAD OVER RAIL BRIDGE

PRELIMINARY OPTIONS SKETCH

OPTION 8

DRAWING SCALE

AS SHOWN

DRAFTER:

ORIG. SIZE

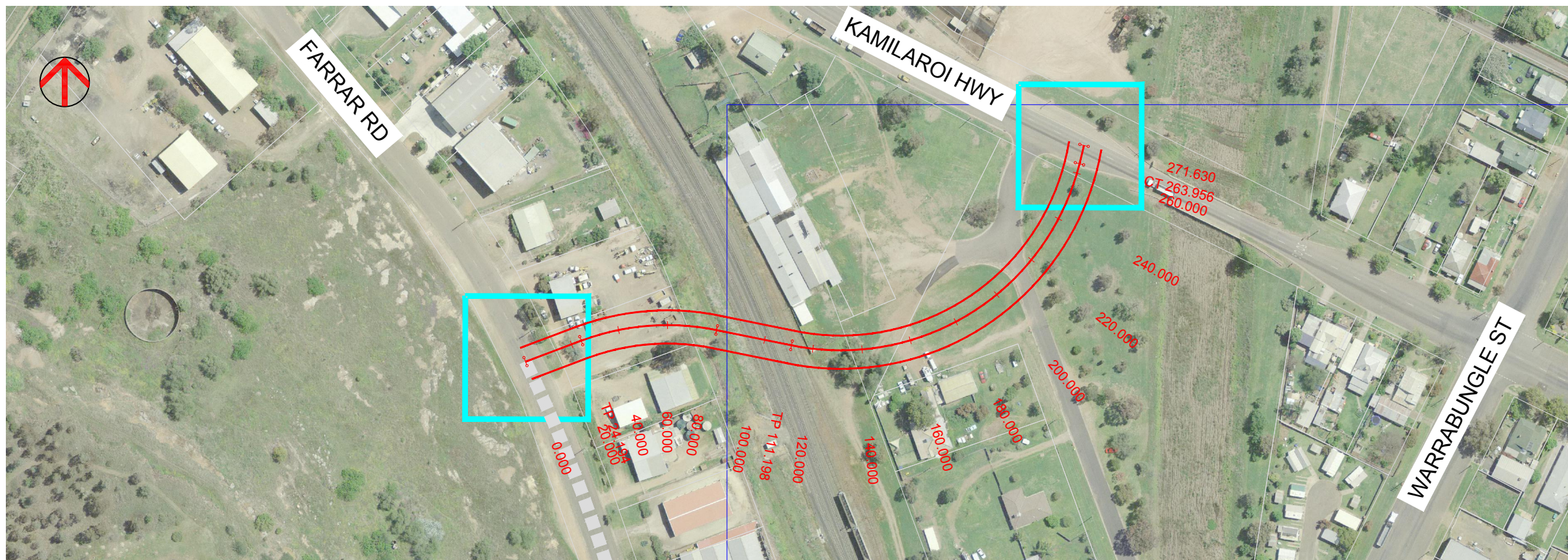
A1

DRAWING No.

SEC143-SKH-PRE-1008

REVISION

B



LEGEND - PLAN

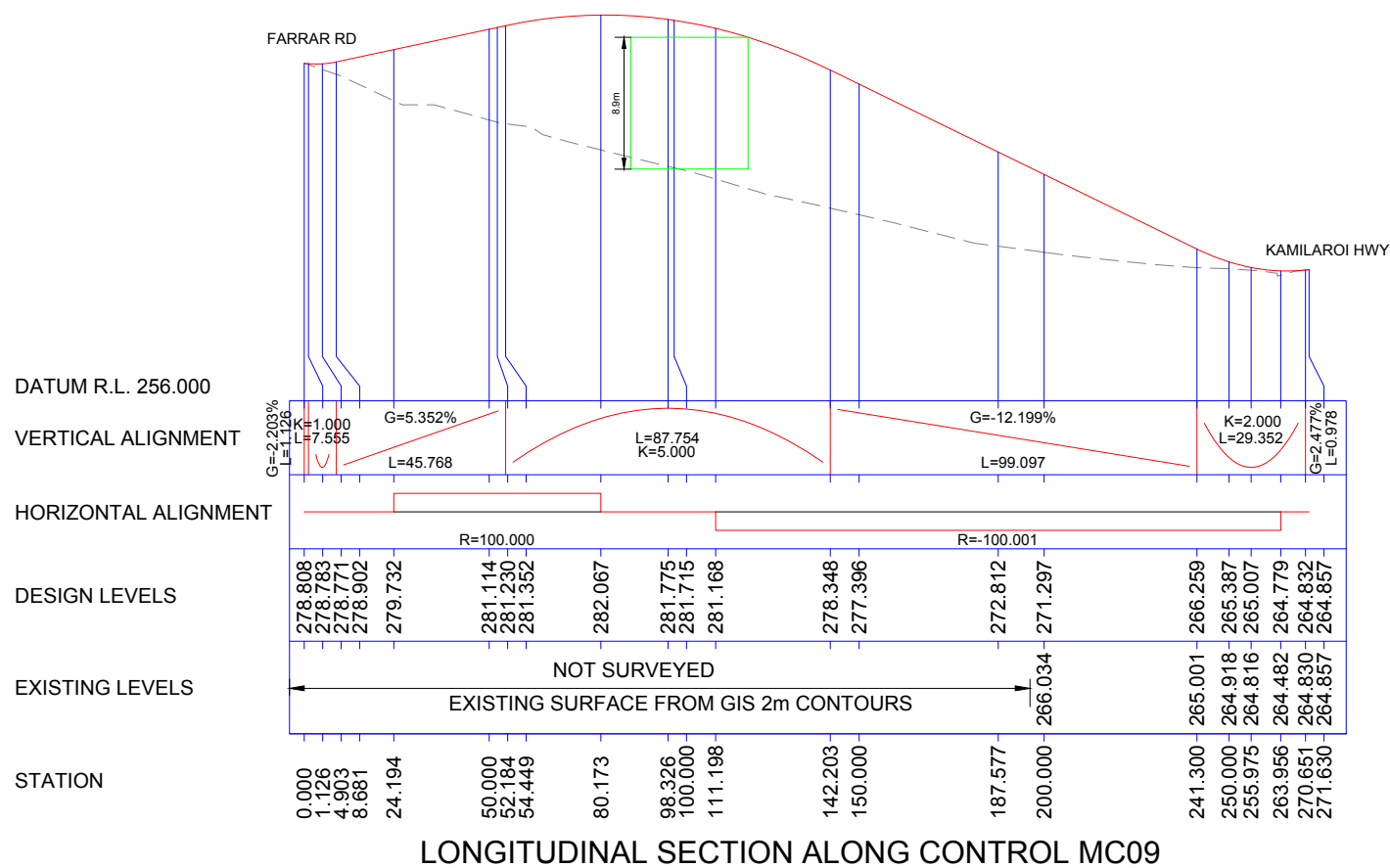
- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

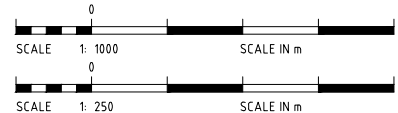
NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC09

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

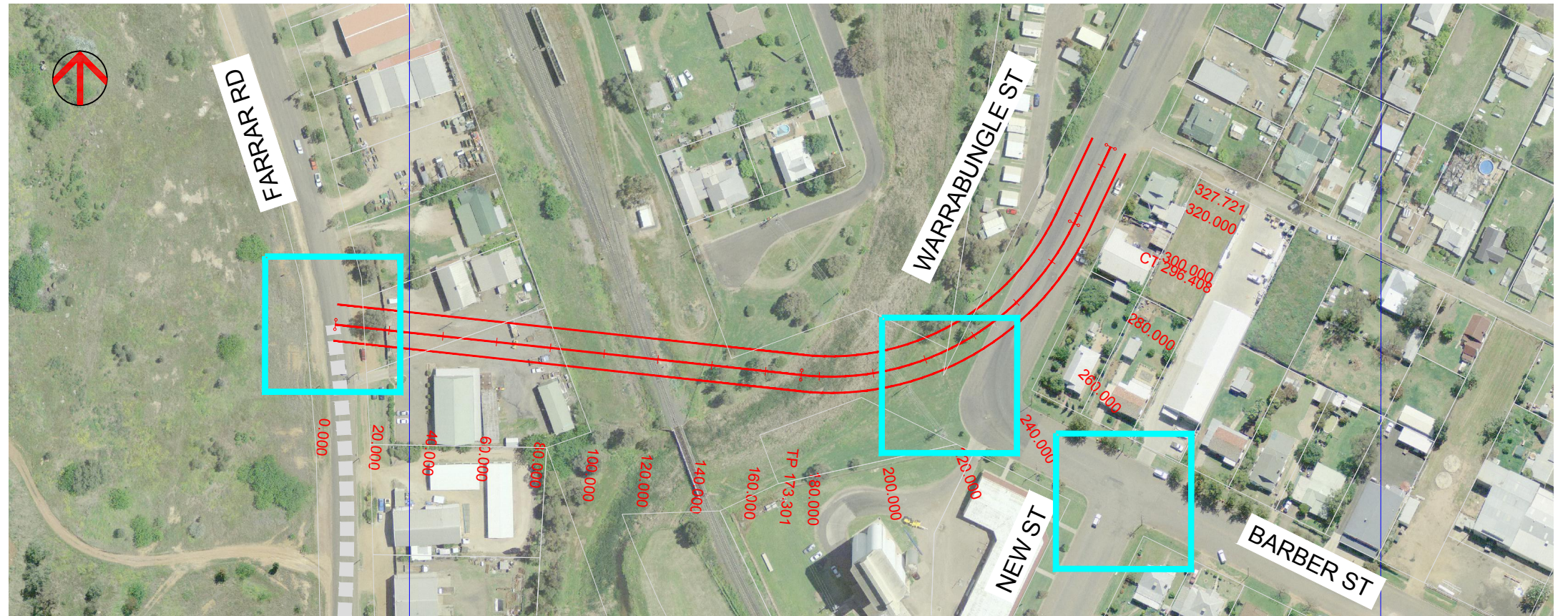
Kellogg Brown & Root Pty Ltd
KBR
 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 9

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1
 DRAWING No.
SEC143-SKH-PRE-1009
 REVISION
B

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LEGEND - PLAN

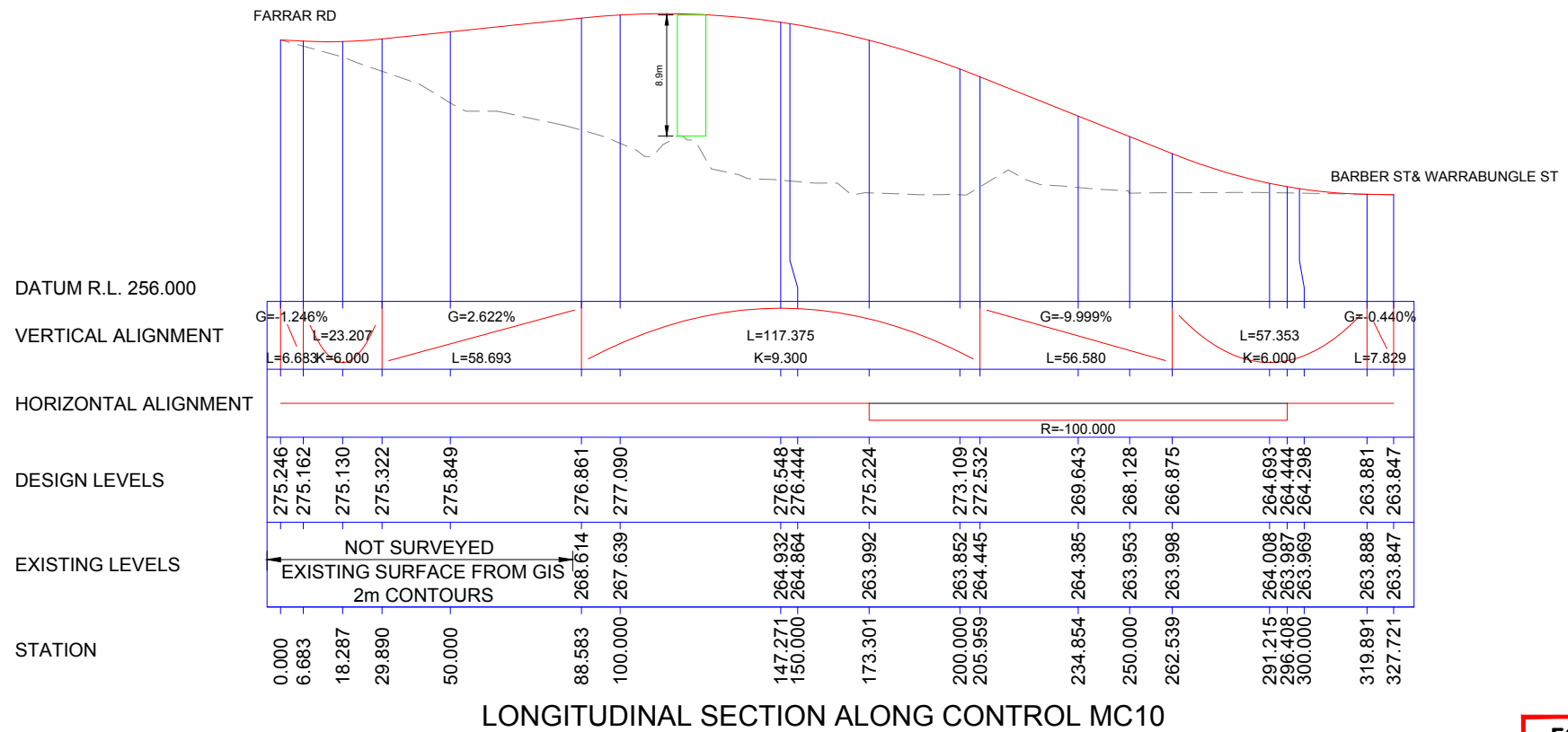
- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

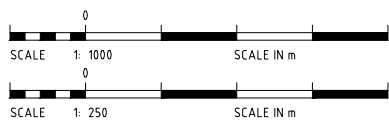
NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
2. REFER TO SEC143-SKH-1015 FOR BARBER ST CONNECTION TO PROPOSED ALIGNMENT.



LONGITUDINAL SECTION ALONG CONTROL MC10

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

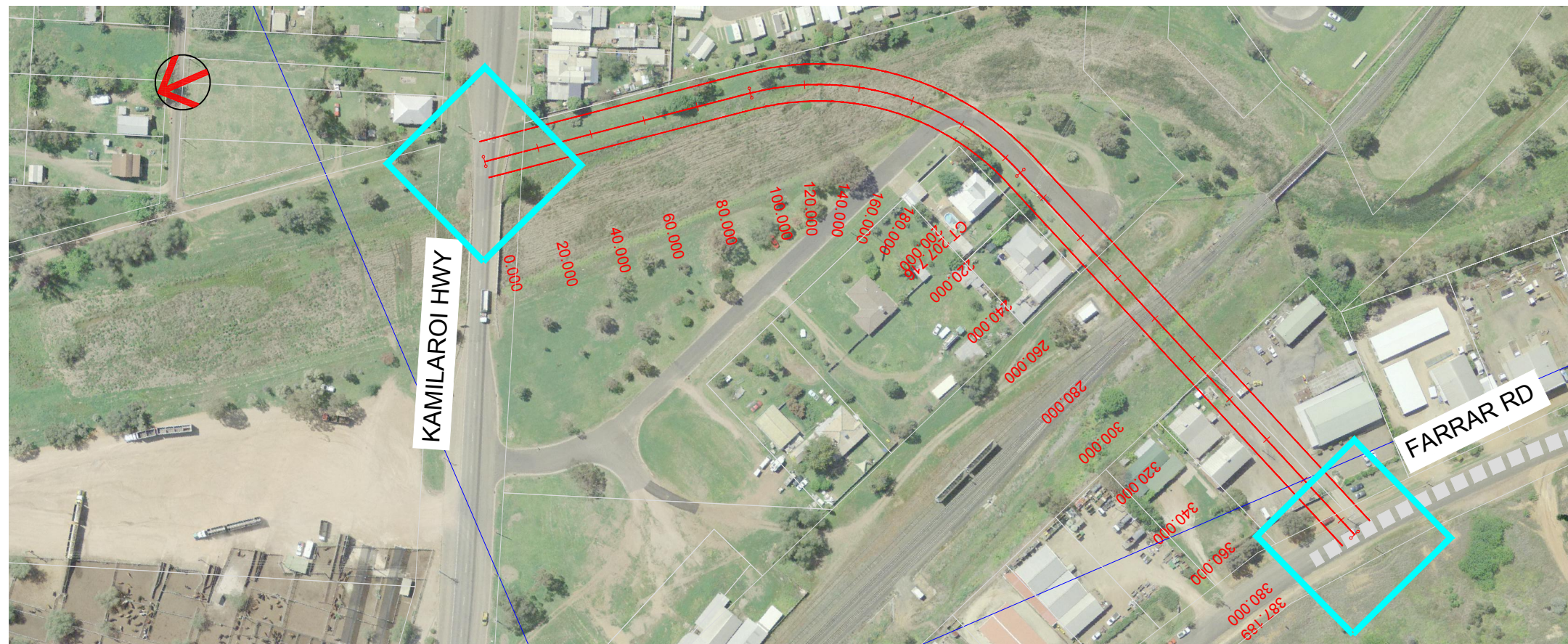
TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 10

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1010

REVISION
B



LEGEND - PLAN

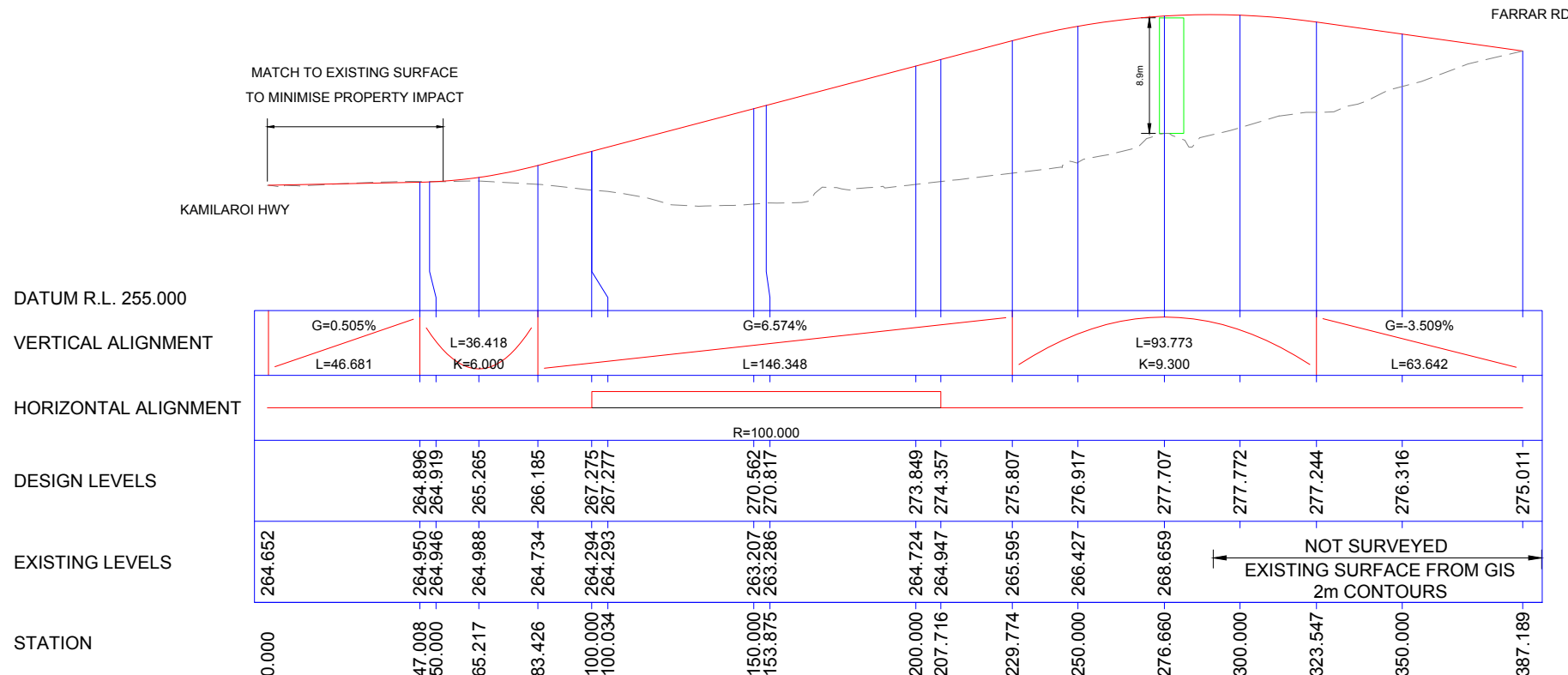
- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC11 A

FOR INFORMATION ONLY

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REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
B	ISSUED FOR DISCUSSION	08.02.2013			
A	ISSUED FOR DISCUSSION	23.01.2013			

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 ABN 91 007 660 317

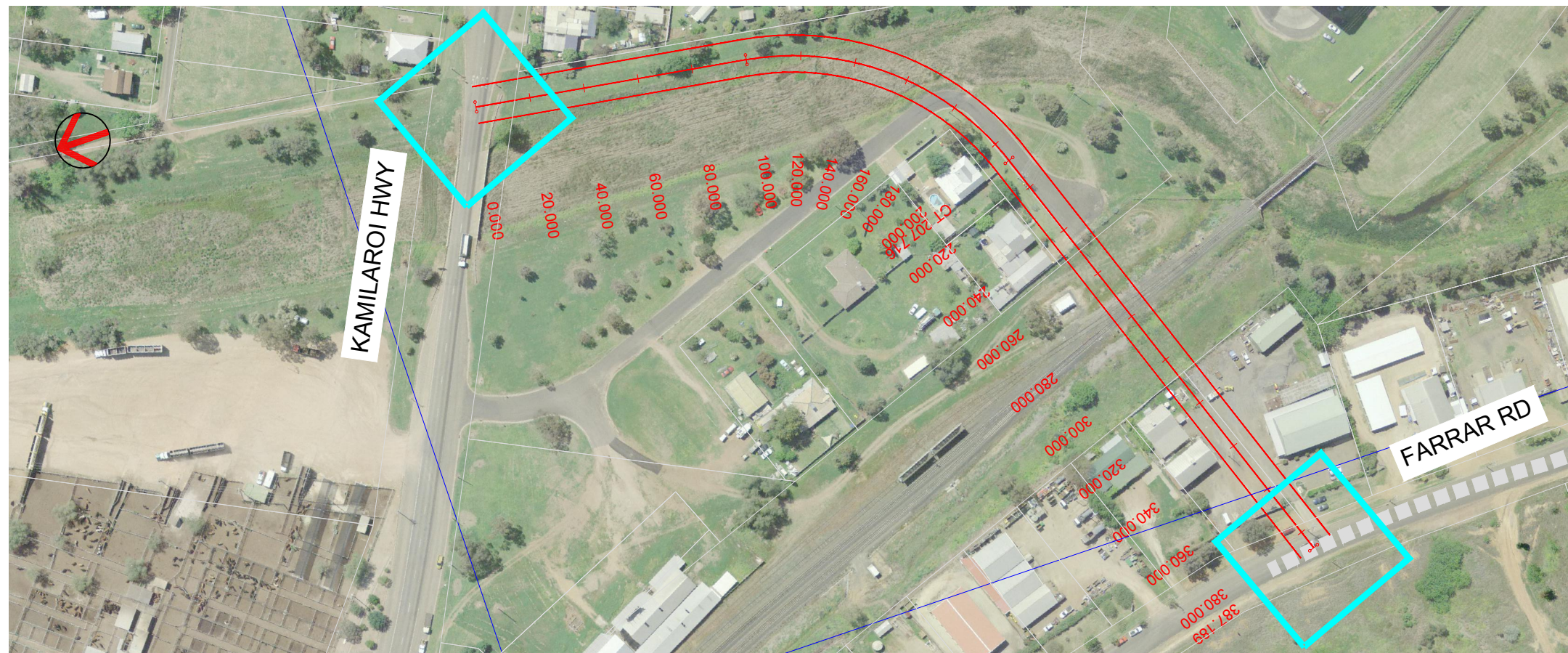
TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 11A - VERTICAL ALIGNMENT OPTION

DRAWING SCALE
AS SHOWN

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1011

REVISION
C



LEGEND - PLAN

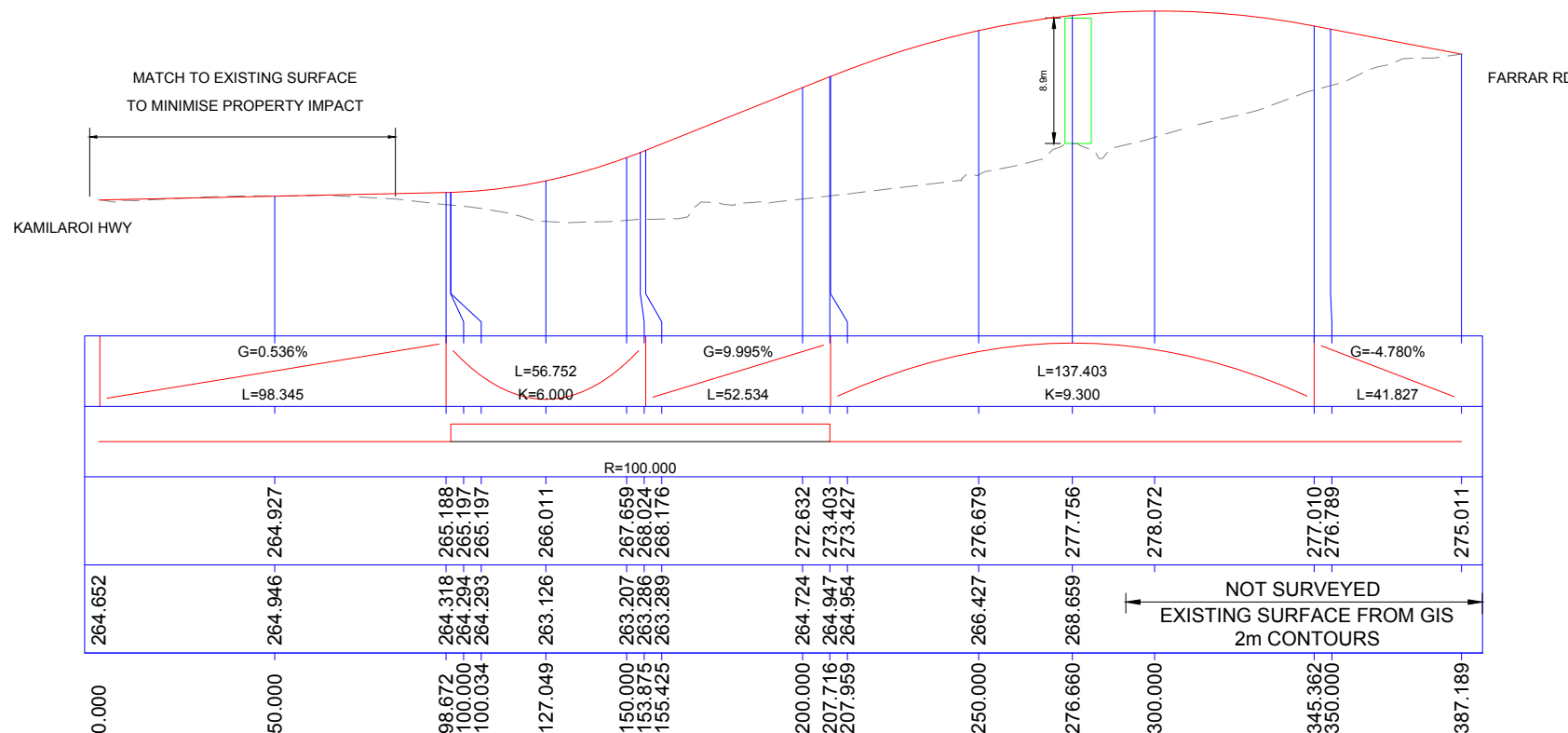
- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

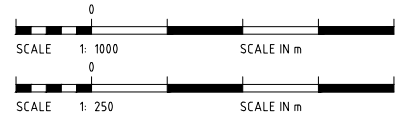
NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC11B

FOR INFORMATION ONLY



REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 11B - VERTICAL ALIGNMENT OPTION

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1
 DRAWING No.
SEC143-SKH-PRE-1012
 REVISION
B

© Kellogg Brown & Root DATE: Wednesday, 27 February 2013 10:56:28 AM FILE: O:\BBS\PROJECTS\SEC143 - GUNNDAH ROAD OVER RAIL\2 DESIGN WORKING\CIVIL\SKETCHES\SEC143-SKH-PRE-1012.DWG

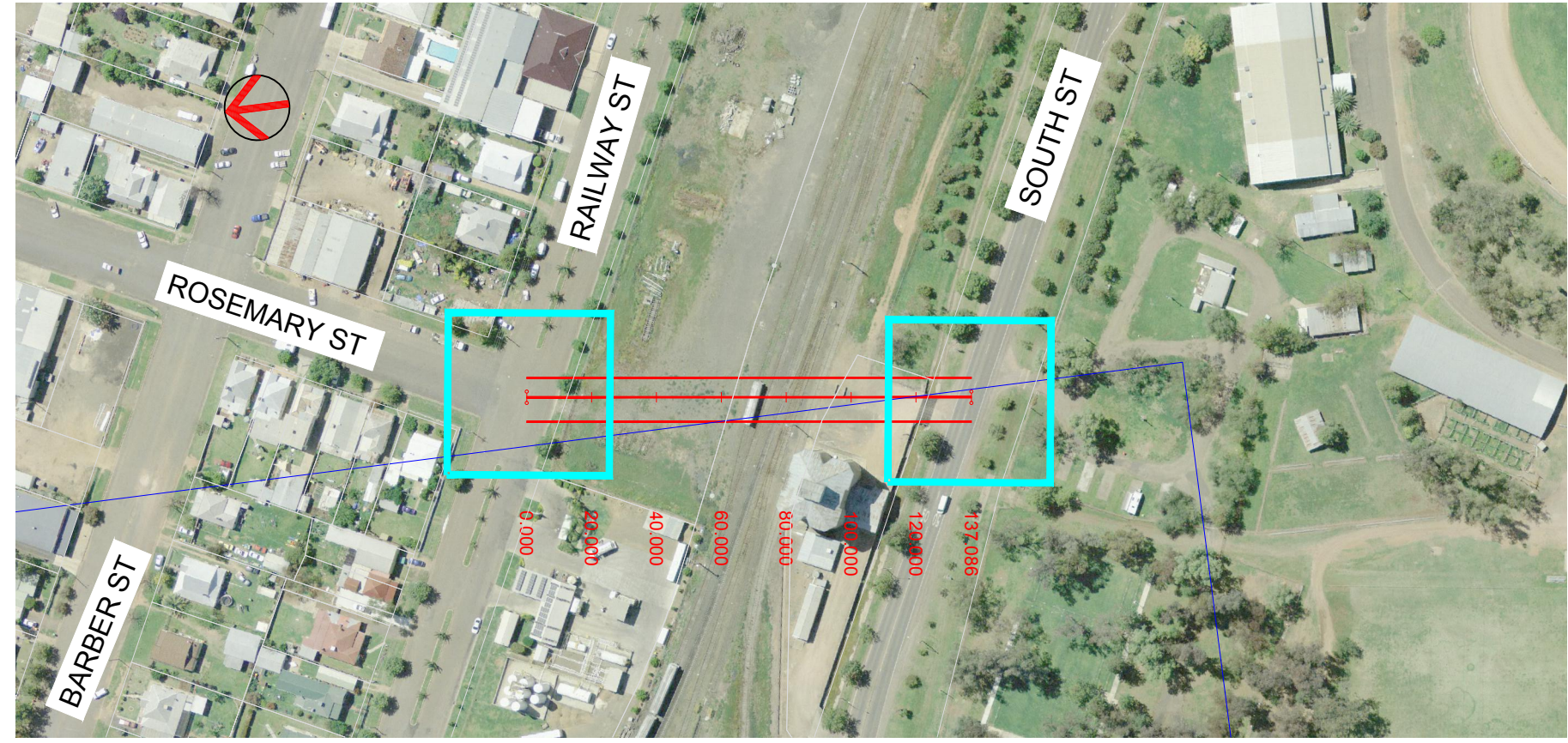
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LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

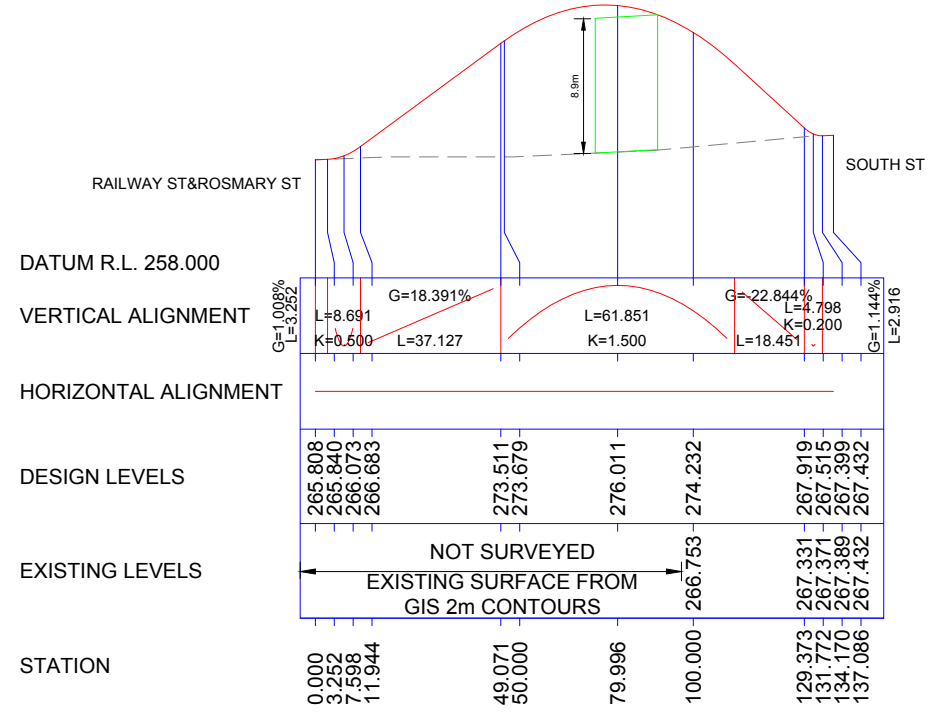
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

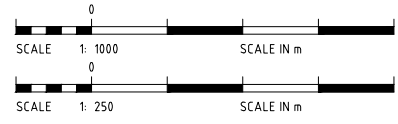


NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.



LONGITUDINAL SECTION ALONG CONTROL MC12



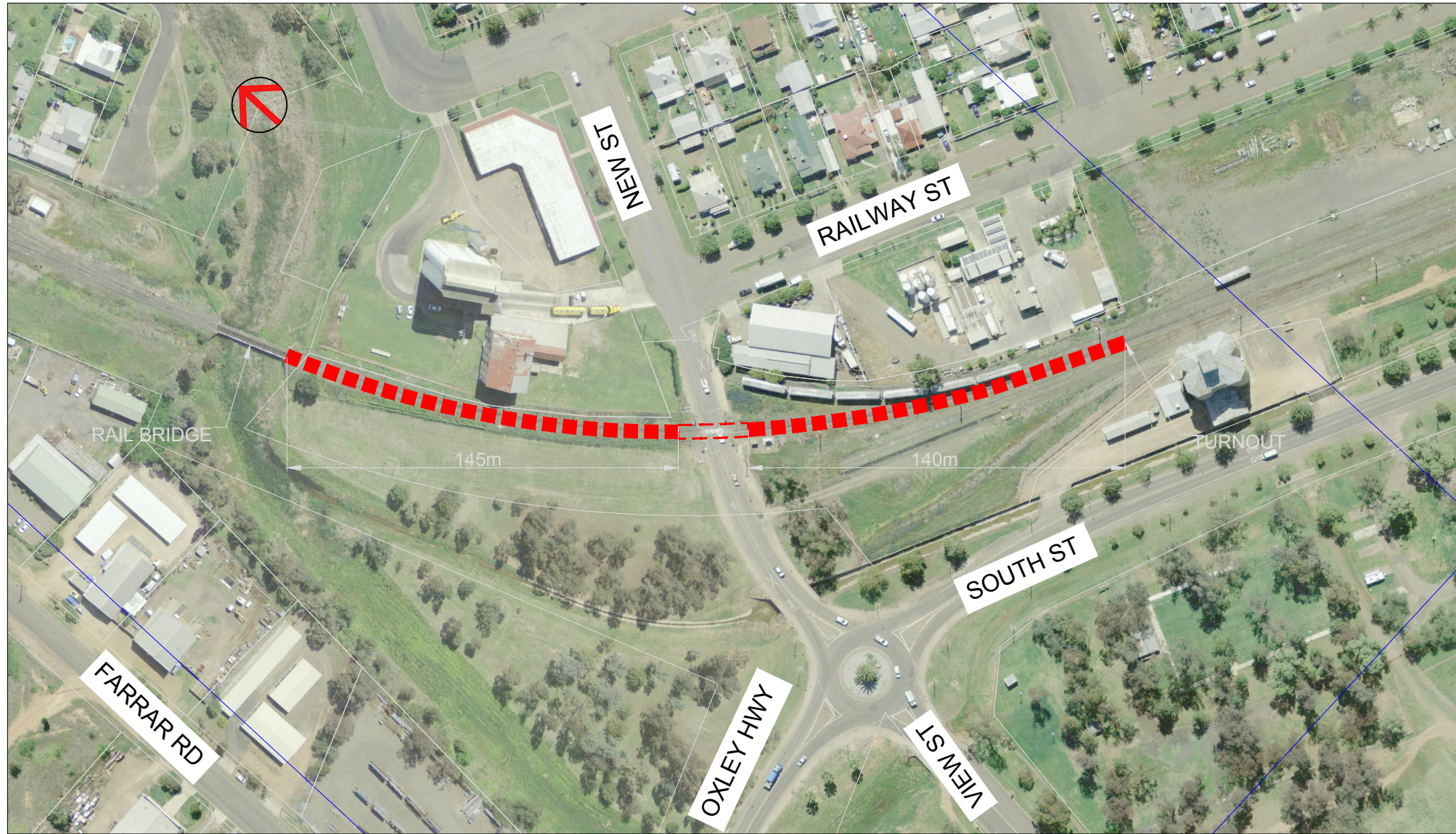
FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE	
GUNNDAH SECOND ROAD OVER RAIL BRIDGE PRELIMINARY OPTIONS SKETCH OPTION 12	
DRAWING SCALE AS SHOWN	ORIG. SIZE A1
DRAWING No. SEC143-SKH-PRE-1013	REVISION B



LEGEND

- ■ ■ VERTICAL REALIGNMENT OF RAIL TO PROVIDE VERTICAL CLEARANCE
- - - PROPOSED RAIL BRIDGE



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			

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 ABN 91 007 660 317

TITLE
GUNNEDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 13

DRAWING SCALE
AS SHOWN
 DRAFTER:

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1014

REVISION
B

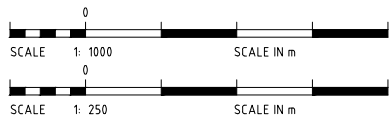
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LEGEND - LONGITUDINAL SECTION

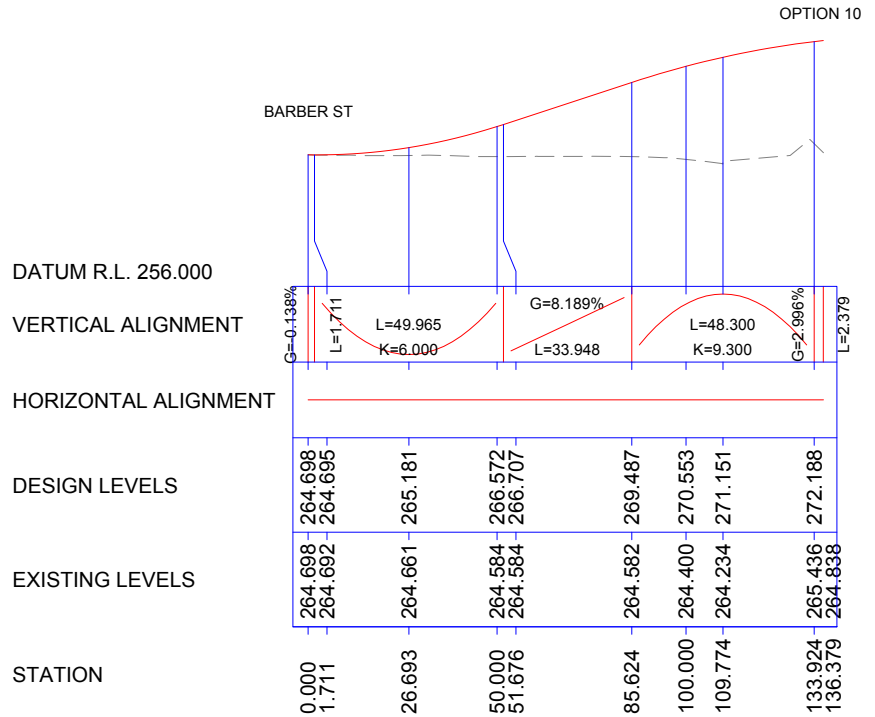
- DESIGN SURFACE
- - - EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

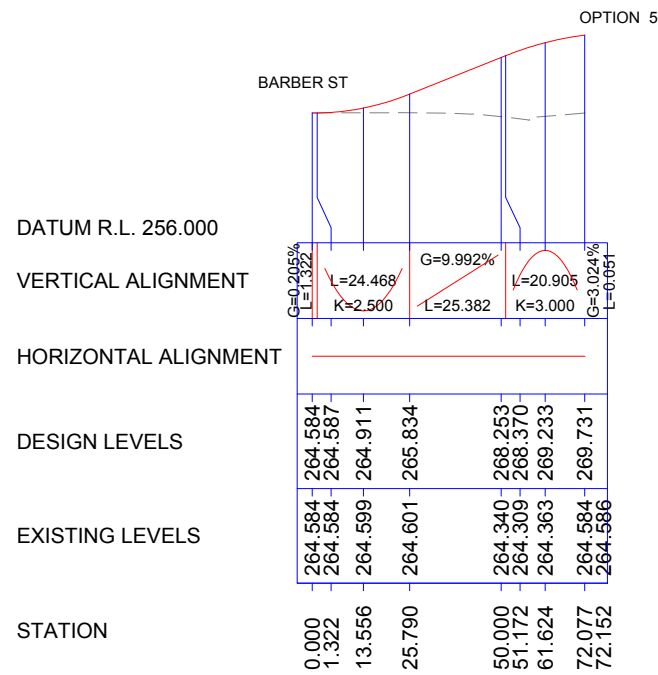
1. REFER TO SEC143-SKH-PRE-1005, SEC143-SKH-PRE-1006 AND SEC143-SKH-PRE-1010 FOR PLANS



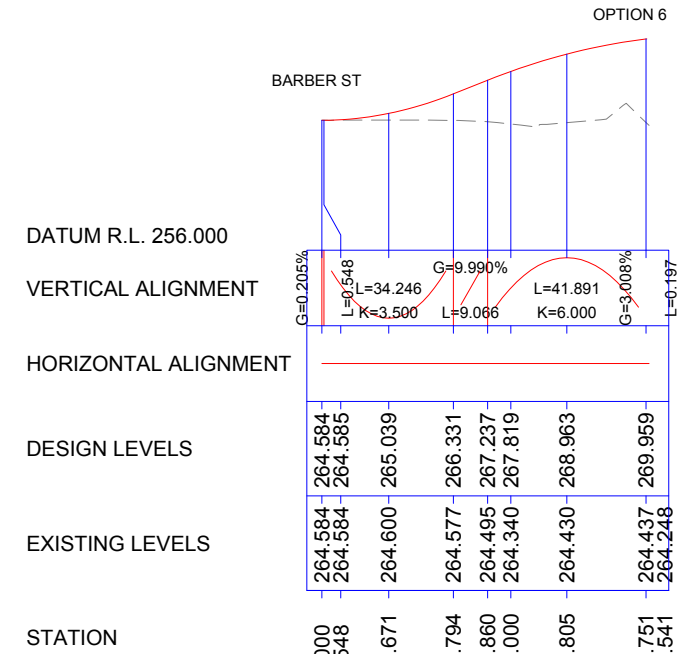
REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
			PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	23.01.2013			



LONGITUDINAL SECTION ALONG BARBER ST FOR OPTION 10



LONGITUDINAL SECTION ALONG BARBER ST FOR OPTION 5



LONGITUDINAL SECTION ALONG BARBER ST FOR OPTION 6

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Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317

TITLE

GUNNEDAH SECOND ROAD OVER RAIL BRIDGE

PRELIMINARY SKETCH

LONGITUDINAL SECTIONS - RAMPS

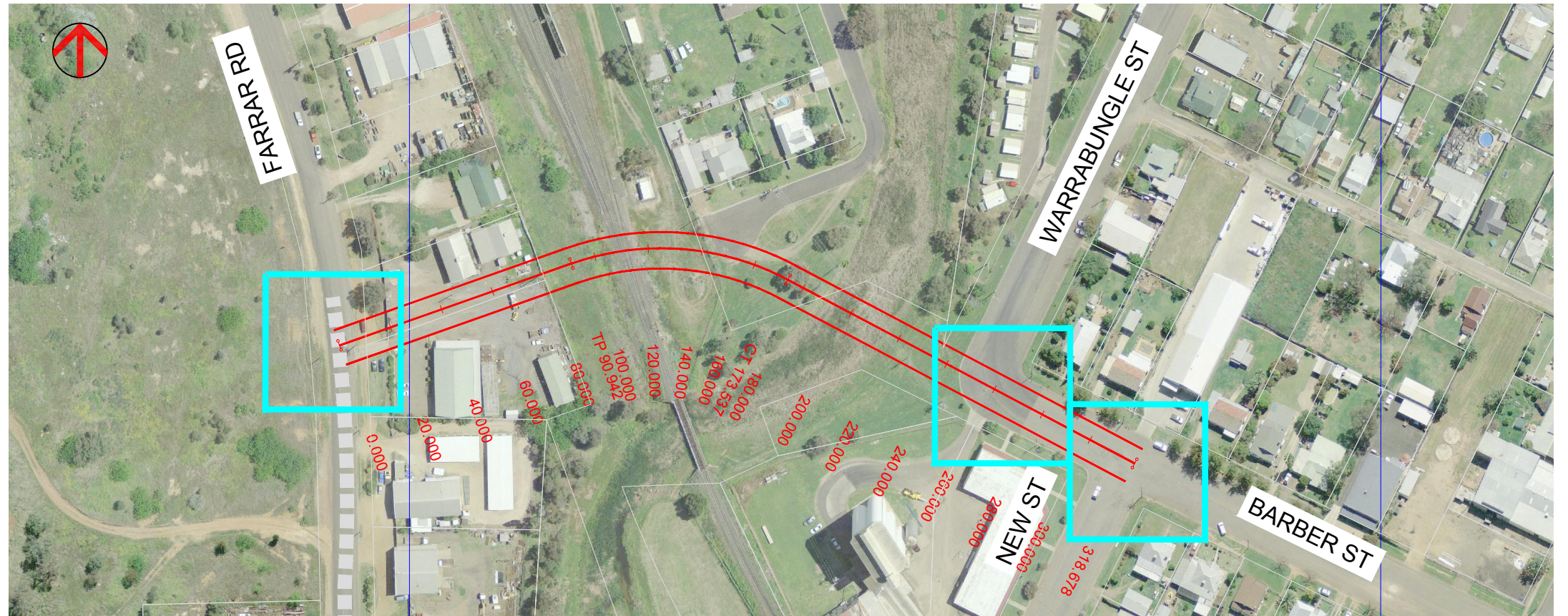
DRAWING SCALE
AS SHOWN

DRAFTER:

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1015

REVISION
B



LEGEND - PLAN

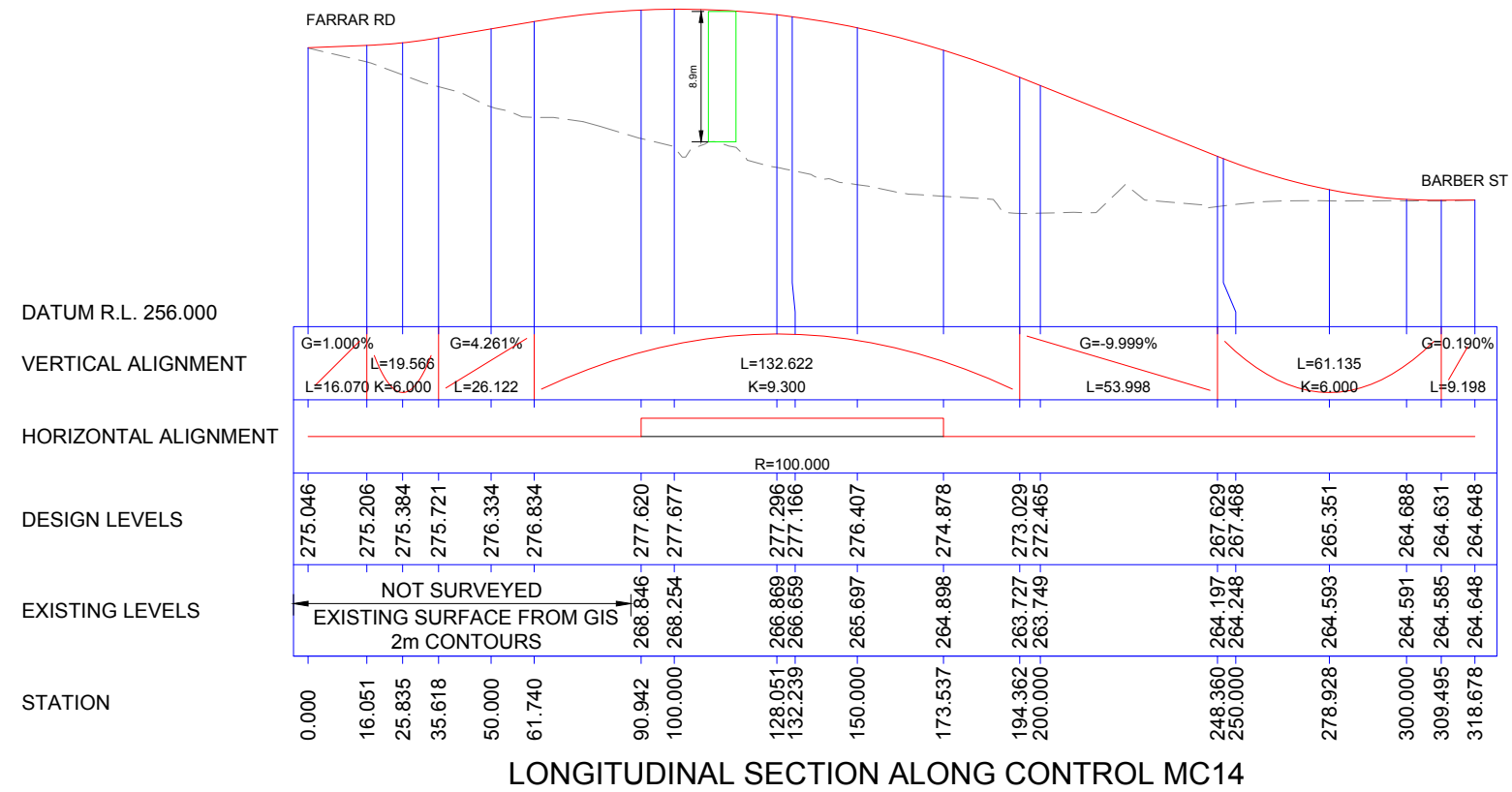
- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

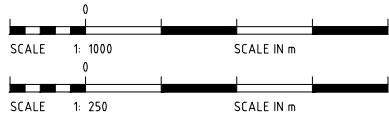
- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
2. REFER TO SEC143-SKH-1015 FOR BARBER ST CONNECTION TO PROPOSED ALIGNMENT.



LONGITUDINAL SECTION ALONG CONTROL MC14



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013			
A	ISSUED FOR DISCUSSION	23.01.2013	CLIENT		

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KBR
 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

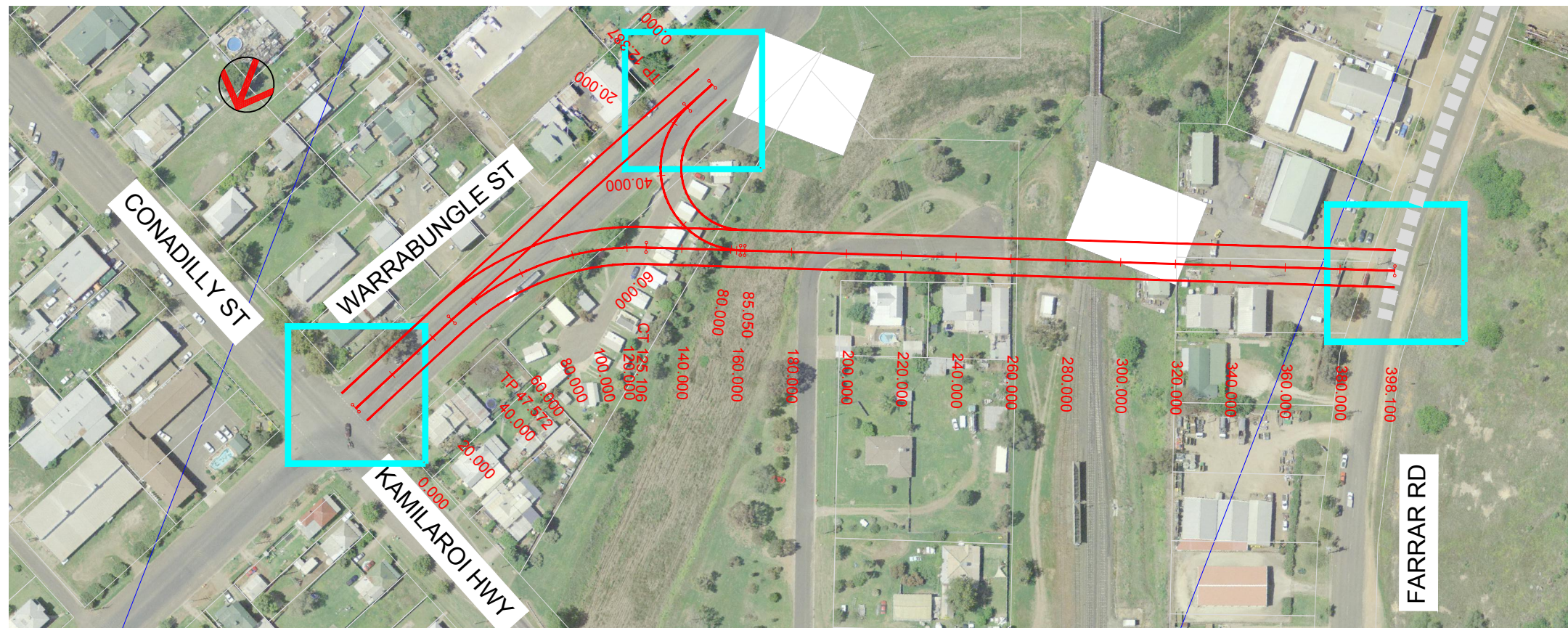
TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 14

DRAWING SCALE
AS SHOWN

ORIG. SIZE
A1

DRAWING No.
SEC143-SKH-PRE-1016

REVISION
C



LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

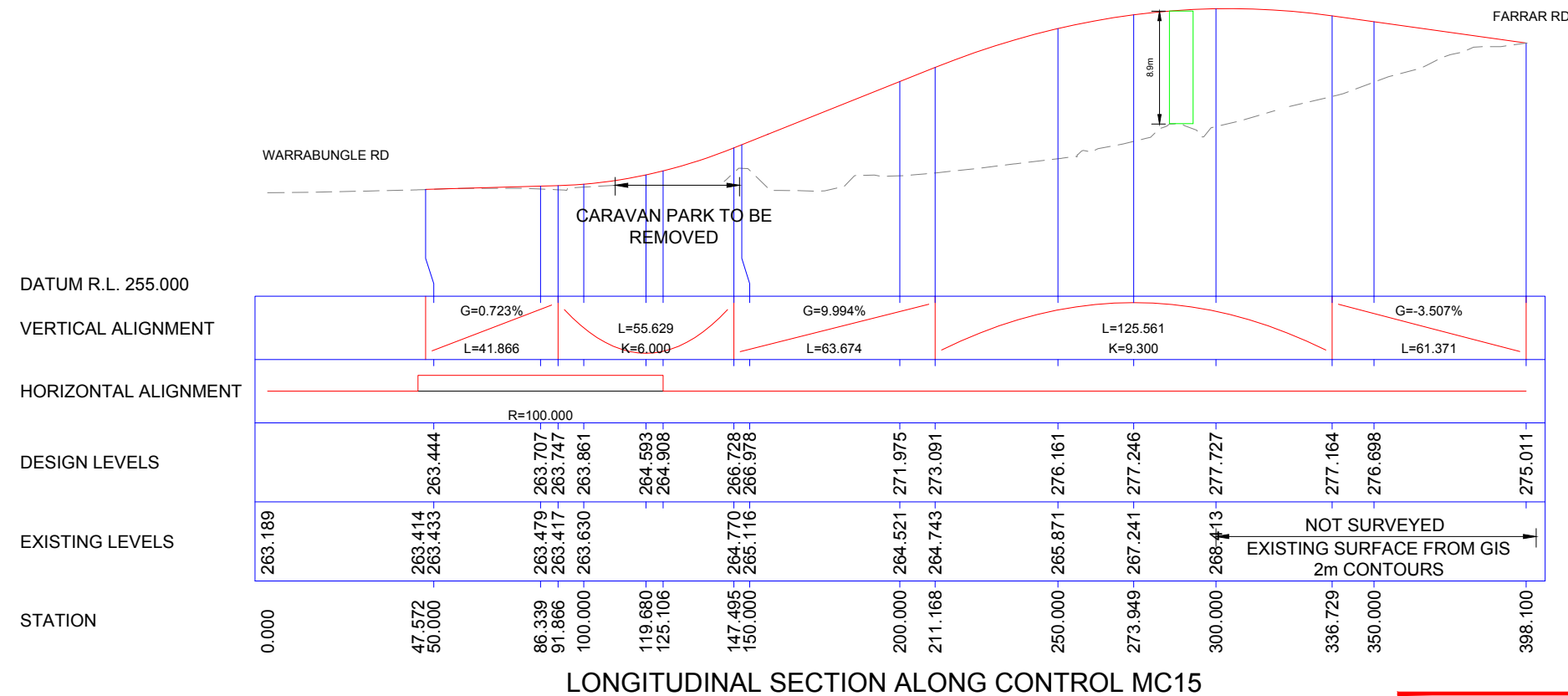
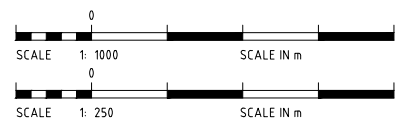
LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

1. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.

2. REFER TO SEC143-SKH-PRE-1021 FOR LONGITUDINAL SECTION OF ENTRY RAMP.



LONGITUDINAL SECTION ALONG CONTROL MC15

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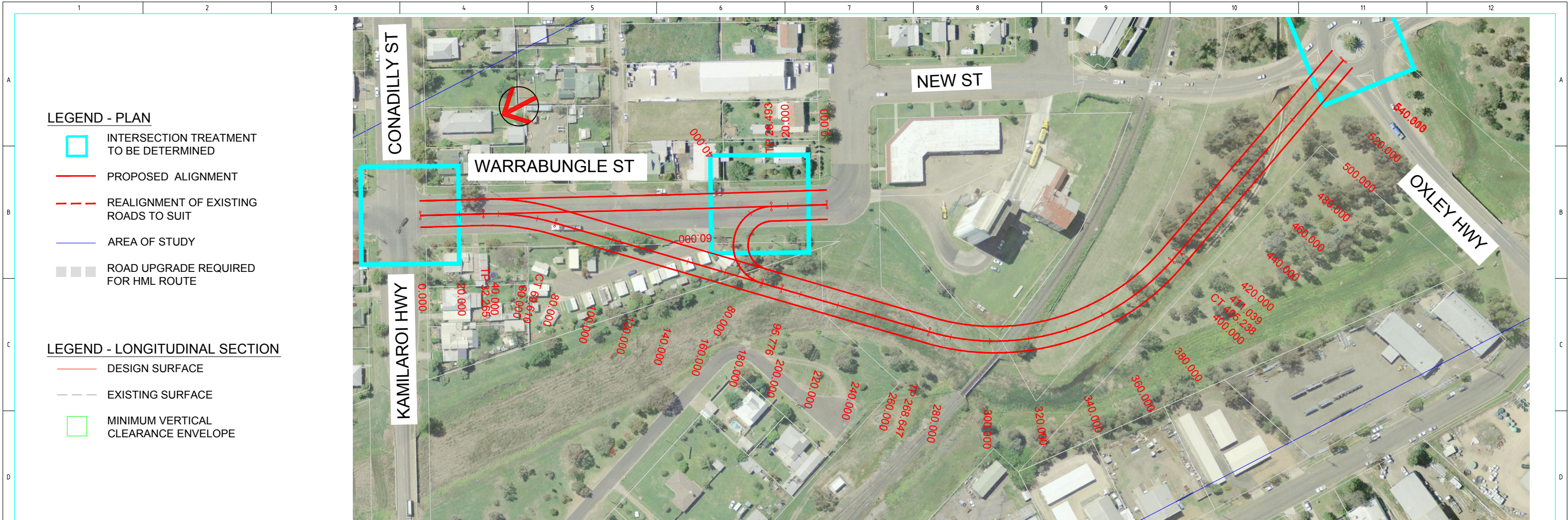
REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	05.02.2013	CLIENT		

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNEDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY OPTIONS SKETCH
 OPTION 15

DRAWING SCALE: AS SHOWN
 ORIG. SIZE: A1
 DRAWING No: SEC143-SKH-PRE-1019
 REVISION: C



LEGEND - PLAN

- INTERSECTION TREATMENT TO BE DETERMINED
- PROPOSED ALIGNMENT
- REALIGNMENT OF EXISTING ROADS TO SUIT
- AREA OF STUDY
- ROAD UPGRADE REQUIRED FOR HML ROUTE

LEGEND - LONGITUDINAL SECTION

- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

1. THE EXISTING ROUNDABOUT BETWEEN SOUTH ST AND OXLEY HWY TO BE MAINTAINED.
2. A MINIMUM VERTICAL CLEARANCE OF 7.1M TO BE ALLOWED FROM TOP OF RAIL TO UNDERSIDE OF BRIDGE. IT HAS BEEN ASSUMED THAT THE STRUCTURAL DEPTH OF BRIDGE IS 1.75m.
3. REFER TO SEC143-SKH-PRE-1021 FOR LONGITUDINAL SECTION OF ENTRY RAMP.

DATUM R.L. 255.000

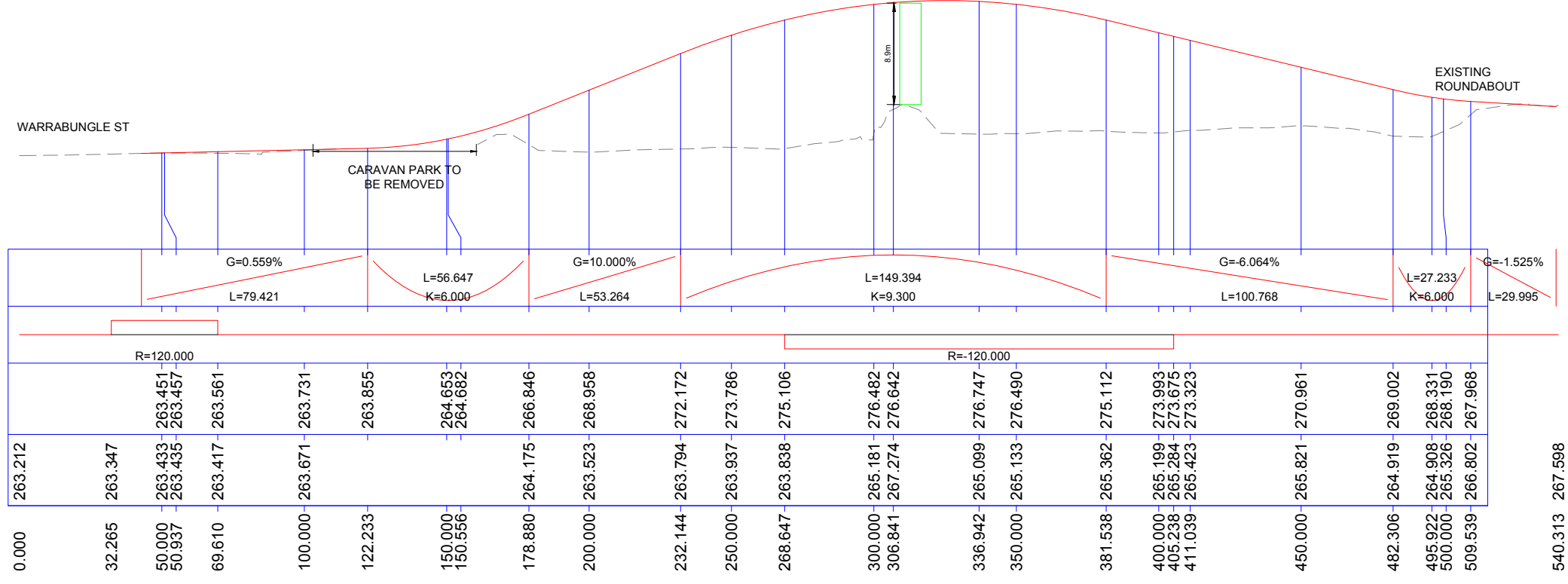
VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

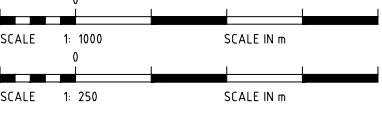
DESIGN LEVELS

EXISTING LEVELS

STATION



LONGITUDINAL SECTION ALONG CONTROL MC16



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	05.02.2013			

Kellogg Brown & Root Pty Ltd

 Kellogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE
GUNNDAH SECOND ROAD OVER RAIL BRIDGE
 PRELIMINARY SKETCH
 OPTION 16

DRAWING No.
SEC143-SKH-PRE-1020

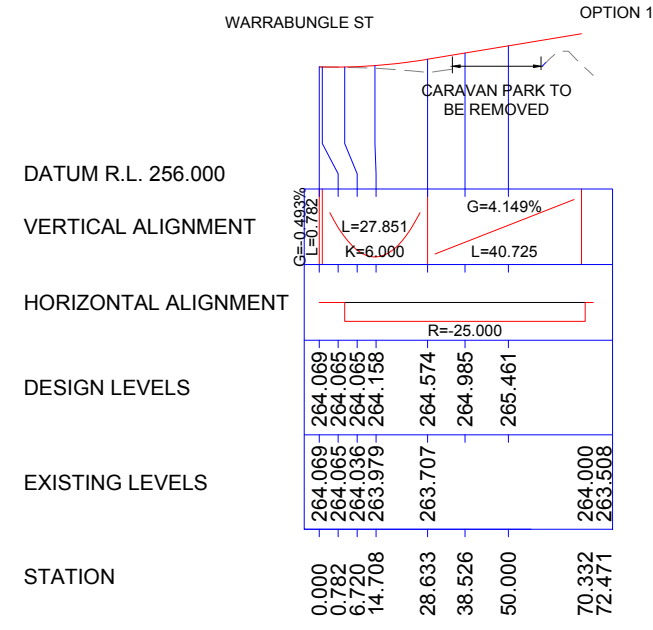
DRAWING SCALE
AS SHOWN

ORIG. SIZE
A1

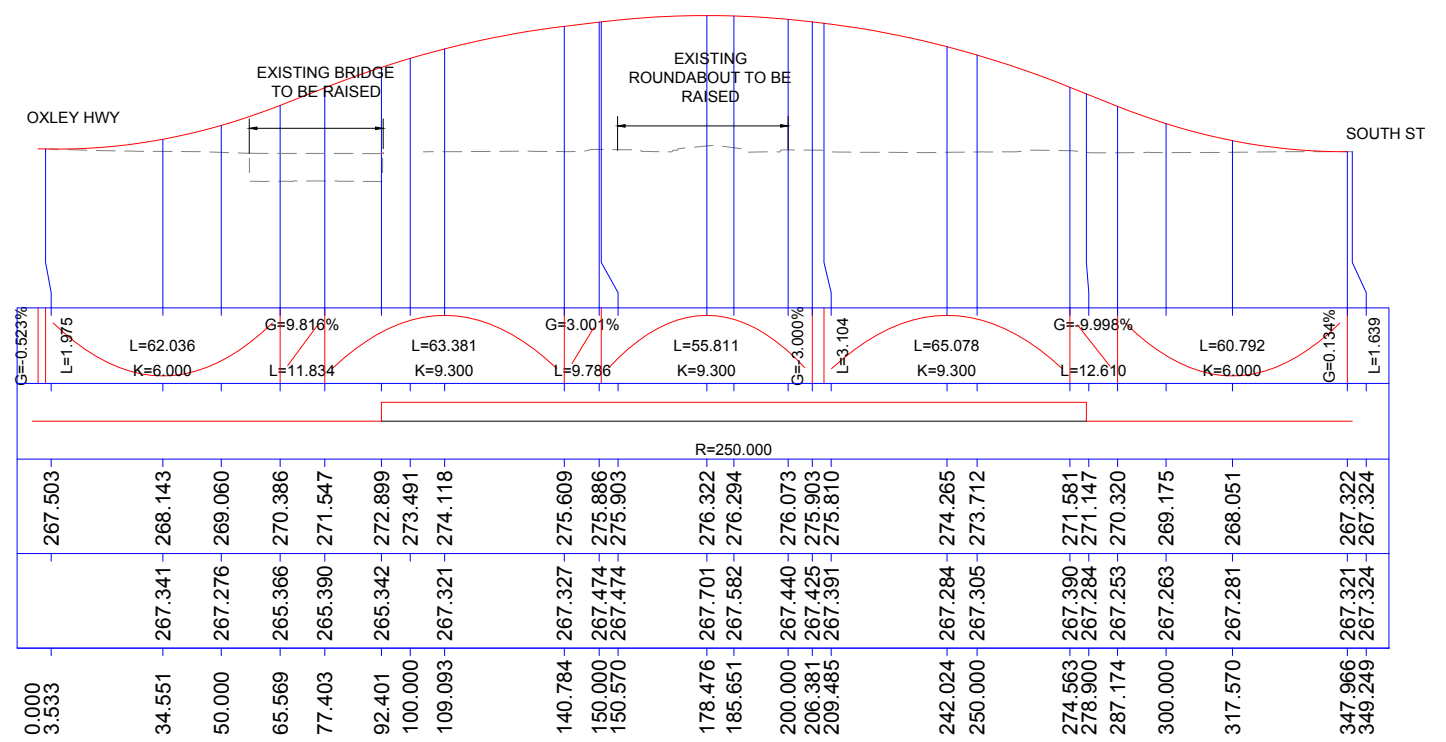
REVISION
C

© Kellogg Brown & Root DATE: Wednesday, 27 February 2013 10:58:18 AM FILE: O:\BBS\PROJECTS\SEC143 - GUNNDAH ROAD OVER RAIL\2 DESIGN WORKING\CIVIL\SKETCHES\SEC143-SKH-PRE-1020.DWG

© Kelllogg Brown & Root DATE: Wednesday, 27 February 2013 10:53:42 AM FILE: 0:\BBS\PROJECTS\SEC143 - GUNNEDAH ROAD OVER RAIL BRIDGE\DESIGN WORKING\CIVIL\SKETCHES\SEC143-SKH-PRE-1021.DWG



LONGITUDINAL SECTION ALONG RAMP FOR OPTION 16



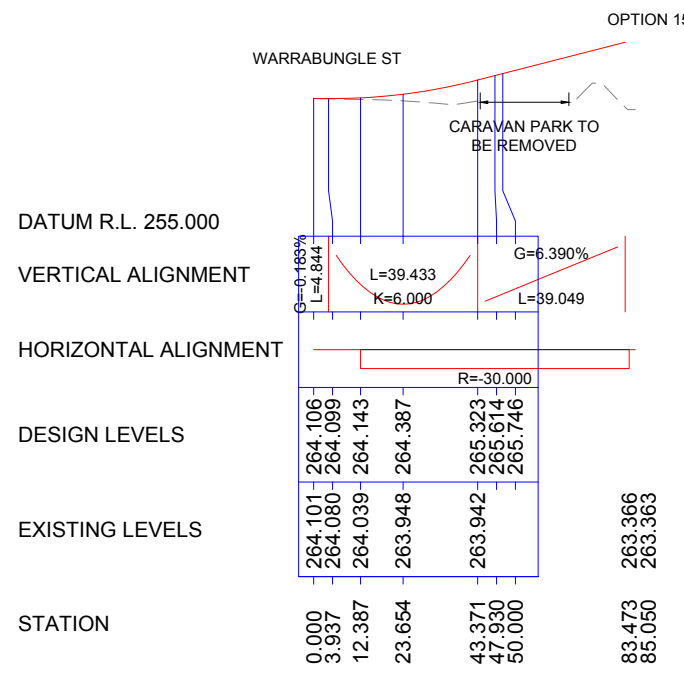
LONGITUDINAL SECTION ALONG OXLEY HWY (60km/h), OPTION 1B

LEGEND - LONGITUDINAL SECTION

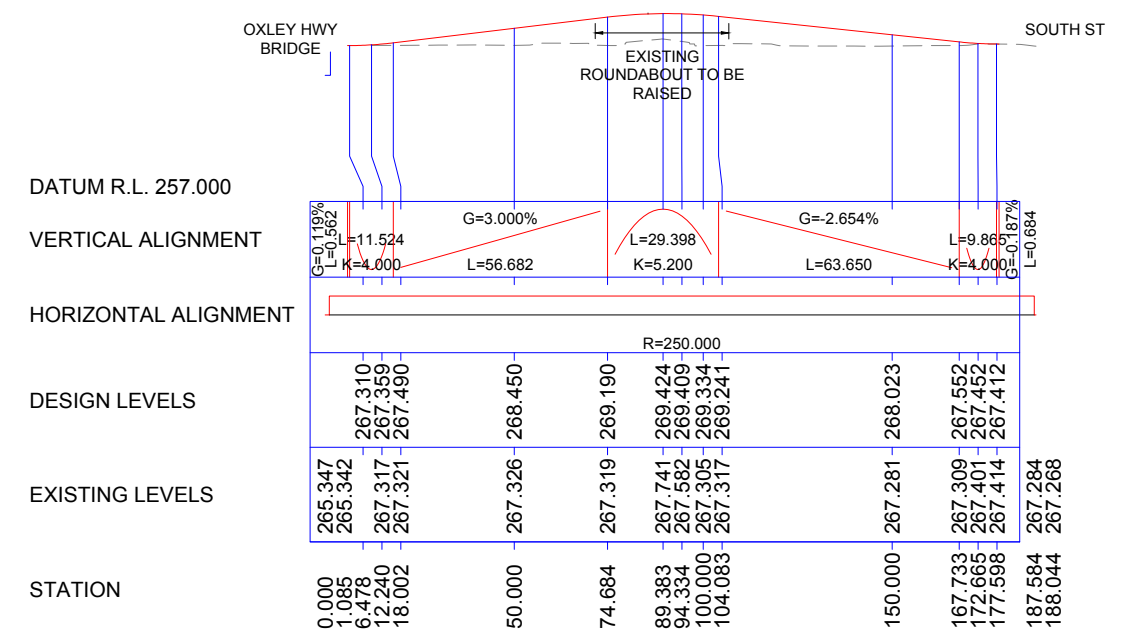
- DESIGN SURFACE
- EXISTING SURFACE
- MINIMUM VERTICAL CLEARANCE ENVELOPE

NOTES

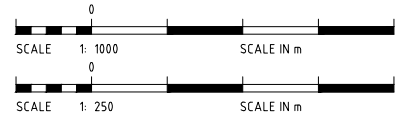
1. REFER TO SEC143-SKH-PRE-1017, SEC143-SKH-PRE-1018, SEC143-SKH-PRE-1019 AND SEC143-SKH-PRE-1020 FOR PLANS



LONGITUDINAL SECTION ALONG RAMP FOR OPTION 15



LONGITUDINAL SECTION ALONG OXLEY HWY (50km/h), OPTION 1C



FOR INFORMATION ONLY

REV	DESCRIPTION	DATE	POSITION	NAME	SIGNATURE
			DRAFTING	M.KANG	
			DESIGN	M.KANG	
			DESIGN VERIFICATION	D.TABRETT	
C	ISSUED FOR DRAFT PRELIMINARY CONCEPT REPORT	26.02.2013	PROJECT APPROVAL	W.ZBOROWSKI	
B	ISSUED FOR DISCUSSION	08.02.2013	CLIENT		
A	ISSUED FOR DISCUSSION	05.02.2013			

Kelllogg Brown & Root Pty Ltd

 Kelllogg Brown & Root Pty Ltd
 ABN 91 007 660 317

TITLE		DRAWING No.	REVISION
GUNNEDAH SECOND ROAD OVER RAIL BRIDGE PRELIMINARY OPTIONS SKETCH ADDITIONAL LONGITUDINAL SECTIONS			
DRAWING SCALE	ORIG. SIZE	SEC143-SKH-PRE-1021	C
AS SHOWN	A1		
DRAFTER:			