

## Appendix C1      Road Upgrade Drawings

# Memorandum

<b>To</b>	Jessica Miller, Craig Sutton, Andrew Brown	<b>Date</b>	27 September 2022
<b>From</b>	Lance Vickery, Senior Project Manager	<b>No. of pages</b>	1 of 2.
<b>Reference</b>	[Project/Document No.]		
<b>Subject</b>	<b>Daroobalgie Solar Farm. Upgrades to Back Yamma and Troubalgie Roads approximately 12 km northeast of Forbes, New South Wales.</b>		

SMEC Australia Pty Ltd has been requested to prepare layout sketches and this report, to clarify the scope of road works agreed with Forbes Shire Council. These road works will support the construction and operation of the Daroobalgie Solar Farm.

The site is accessed initially from the Newell Highway (HW17) at the junction of Back Yamma Road, 9 km north of Forbes. The existing junction is well developed with both CHR (Channelised Right Turn) and AUL (Auxilliary Left Turn) facilities. This junction serves as the access to several industrial lots including the Forbes Central West Livestock Exchange and local traffic on the network in that area. No road works are identified at this location and the performance of the junction will not be adversely impacted by the Solar farm proposal.

Between the Newell Highway and the junction with Troubalgie Road, Back Yamma Road has been widened in recent years and provides a two-lane sealed pavement with approximately 0.5 m of shoulder sealing. The alignment is generally straight and level.

At the access to the Forbes Central West Livestock Exchange the junction has been constructed to favour heavy vehicle movement in/out of that facility. Given the size and configuration of vehicles at the site this is reasonable. It does however raise a concern for longer heavy vehicles travelling further to the east. A check of swept paths demonstrates that minor widening would be required to accommodate a 26m B Double movement.

One caution with such widening work is that there is evidence at the site that motorists are demonstrating poor lane discipline and attempting to flatten any deflection intended in the current design. Given the relatively remote location and the ample sight distance at this site, this is not surprising. Further widening is likely to enhance opportunities for such behaviour and increase speeds along Back Yamma Road at the location.

It is **recommended** that serious consideration be given to minimising any new widening work, provided that longer vehicles can be accommodated within the existing sealed pavement.

Delivery of the transformer to site is anticipated to be from the Port of Newcastle. The route would be broadly along the New England Highway, Golden Highway and Newell Highway to the junction of Back Yamma Road. This vehicle would be travelling under an escort arrangement with the ability to utilize the full road width if necessary. A more detailed report should be prepared once the final dimensions of the load are known.

An initial enquiry to Rex J Andrews Pty Ltd (specialist haulage Contractors) has confirmed that previous loads similar to this proposal have been delivered along the above highways without any significant issues.

An initial examination of vehicle turn paths has been carried out and is shown on the attached layouts which considers each junction. It can be seen that the oversize load can be accommodated within the proposed road formation. Details of the Oversized Vehicle can be seen on the attached drawing supplied by Rex J Andrews.

At the existing junctions of

1. Back Yamma Road / Troubalgie Road
2. Troubalgie Road/ Solar Farm site access

It is proposed that each junction will be reconstructed to provide

- A BAR (Basic Right Turn) 100 km/h design speed in accordance with Austroads guide to road design part 4A, Figure 7.6
- A BAL (Basic Left Turn) 100 km/h design speed in accordance with Austroads guide to road design part 4A, Figure 8.2

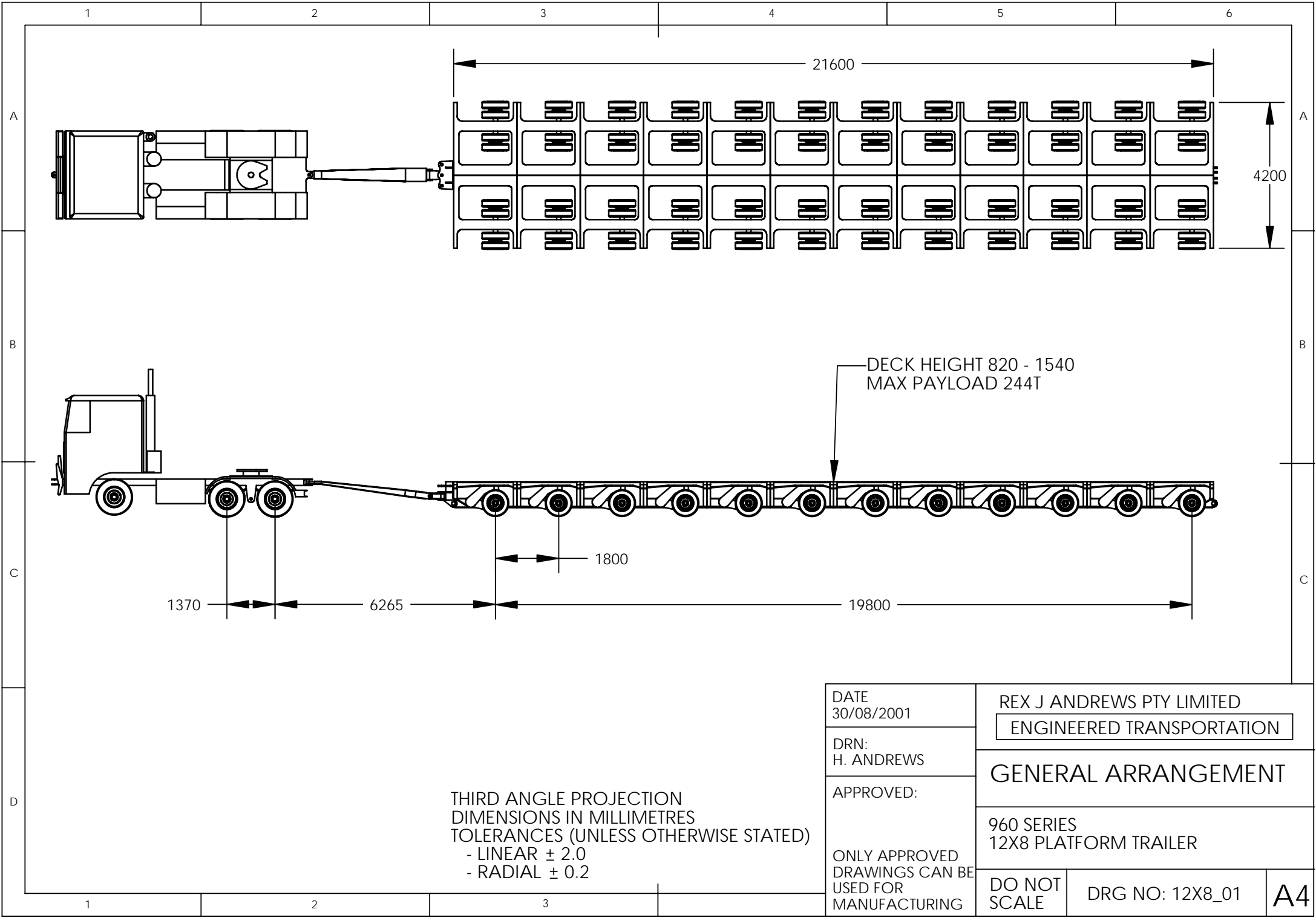
Between the junction of Back Yamma Road and the Solar Farm access, Troubalgie road is to be widened and sealed such that it provides two sealed lanes of 3.25m and sealed shoulders 1.0m wide (overall width of seal is 8.5m).

Attached are layouts marked up to reflect the above scope of work.

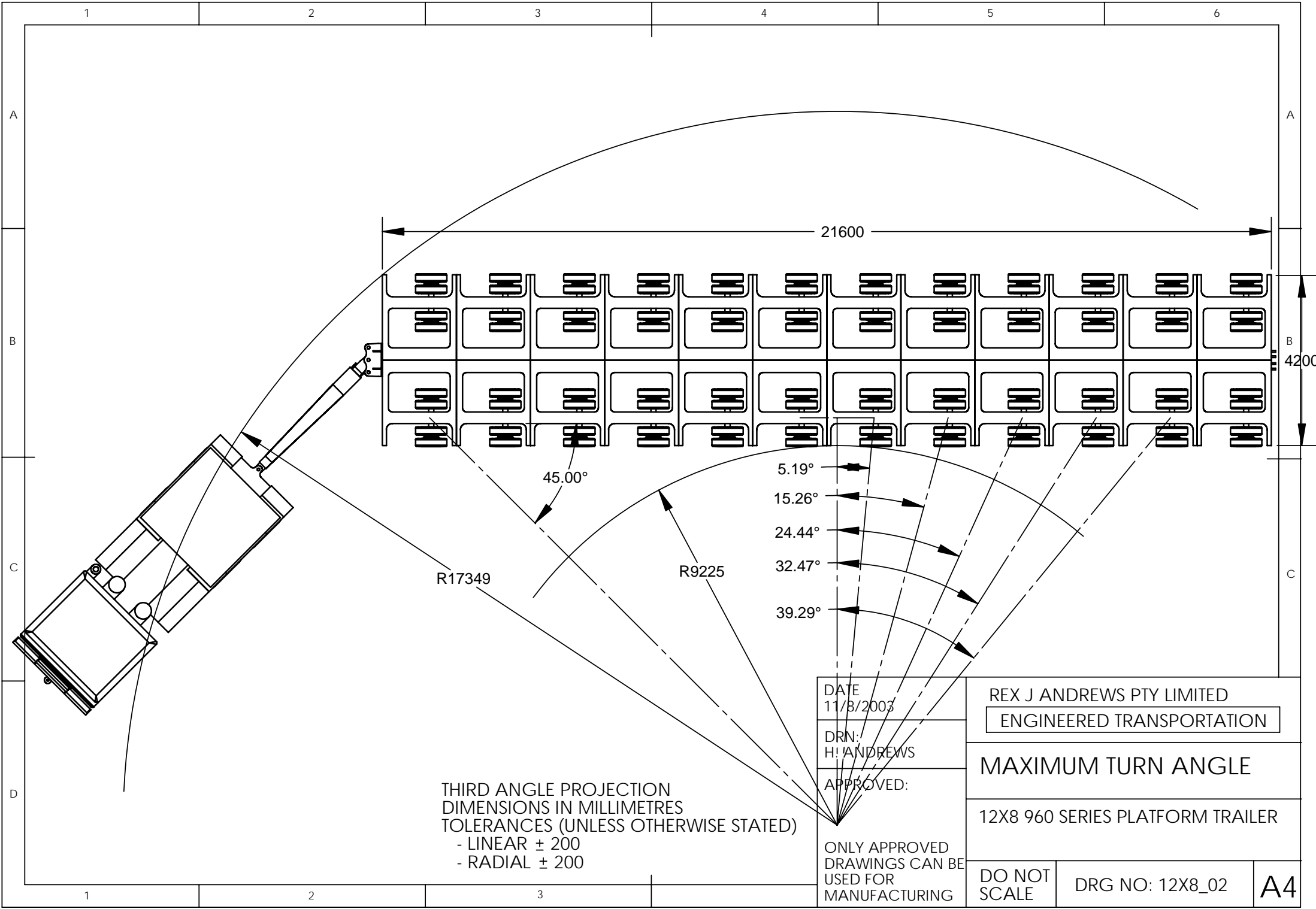
Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lance Vickery', with a large 'X' mark over the first part of the signature.

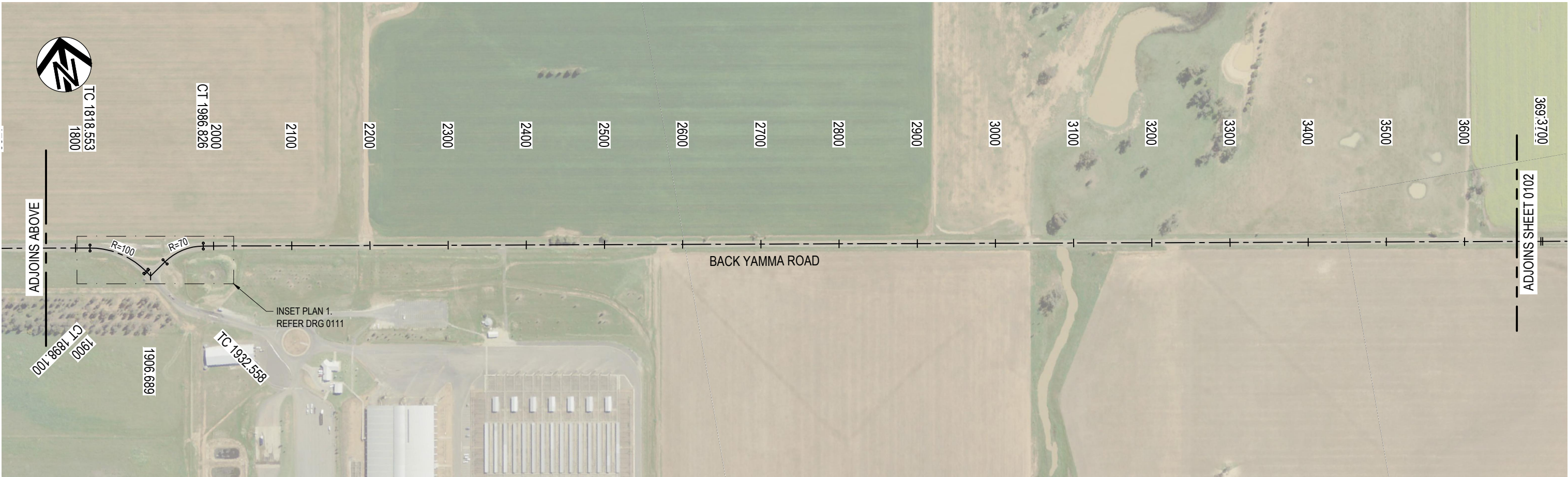
**Lance Vickery**  
Senior Project Manager



DATE 30/08/2001	REX J ANDREWS PTY LIMITED		
DRN: H. ANDREWS	ENGINEERED TRANSPORTATION		
APPROVED:	GENERAL ARRANGEMENT		
ONLY APPROVED DRAWINGS CAN BE USED FOR MANUFACTURING	960 SERIES 12X8 PLATFORM TRAILER		
	DO NOT SCALE	DRG NO: 12X8_01	A4







NOT FOR CONSTRUCTION

SCALE 1:5000  
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AT A3 SIZE DRAWING

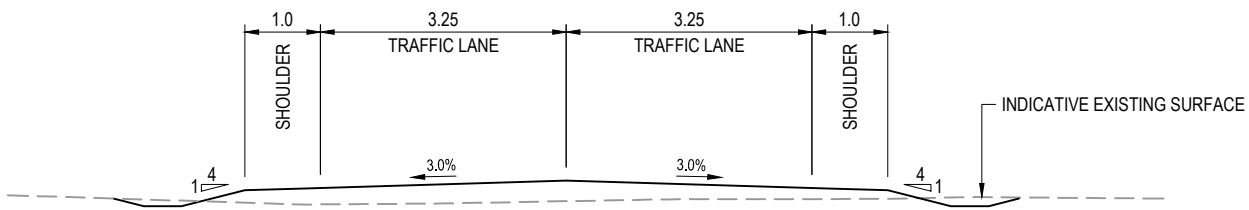
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**DAROOBALGIE SOLAR ROAD DESIGN**  
**GENERAL ARRANGEMENT**  
**SHEET 1**

**INFORMATION DOCUMENT**  
**1043887-220708-PLAN-0101-DK\_[ID]**

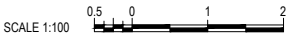
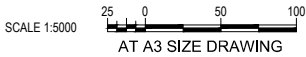
 **SMC**  
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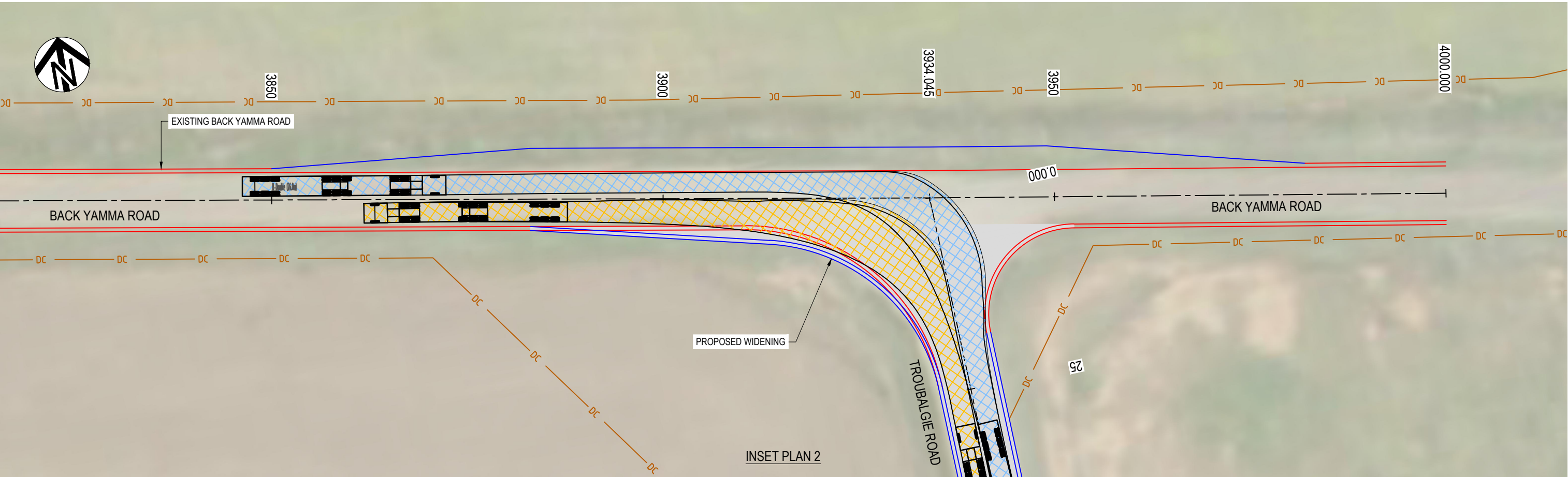
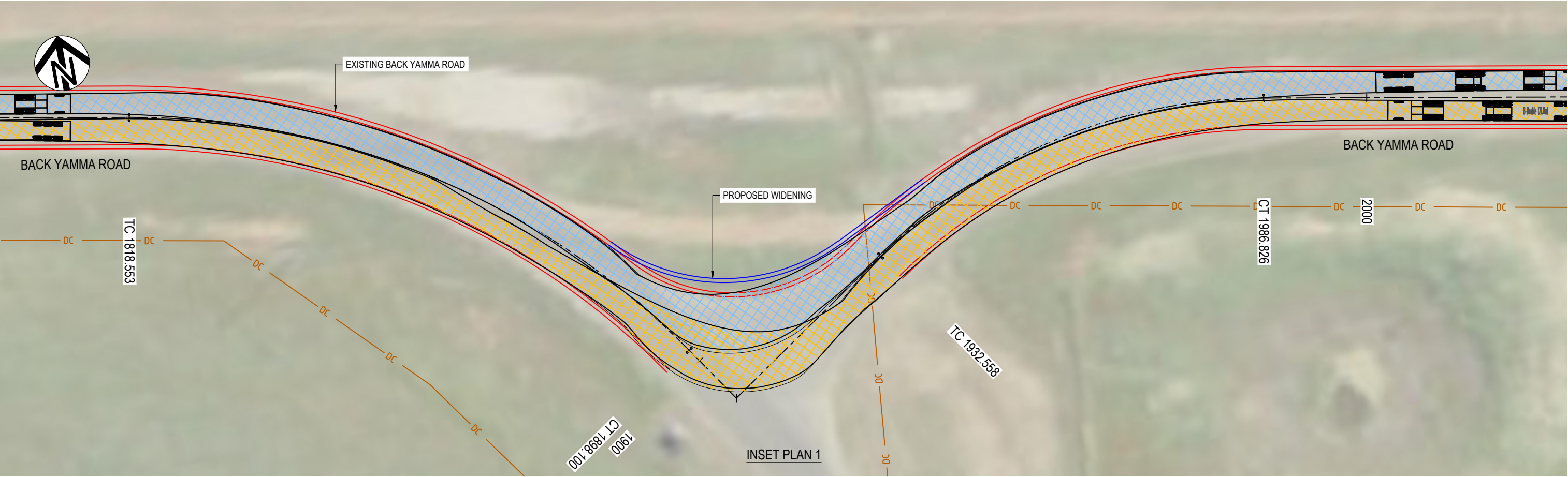


TYPICAL CROSS SECTION  
TROUBALGIE ROAD  
SCALE 1:100

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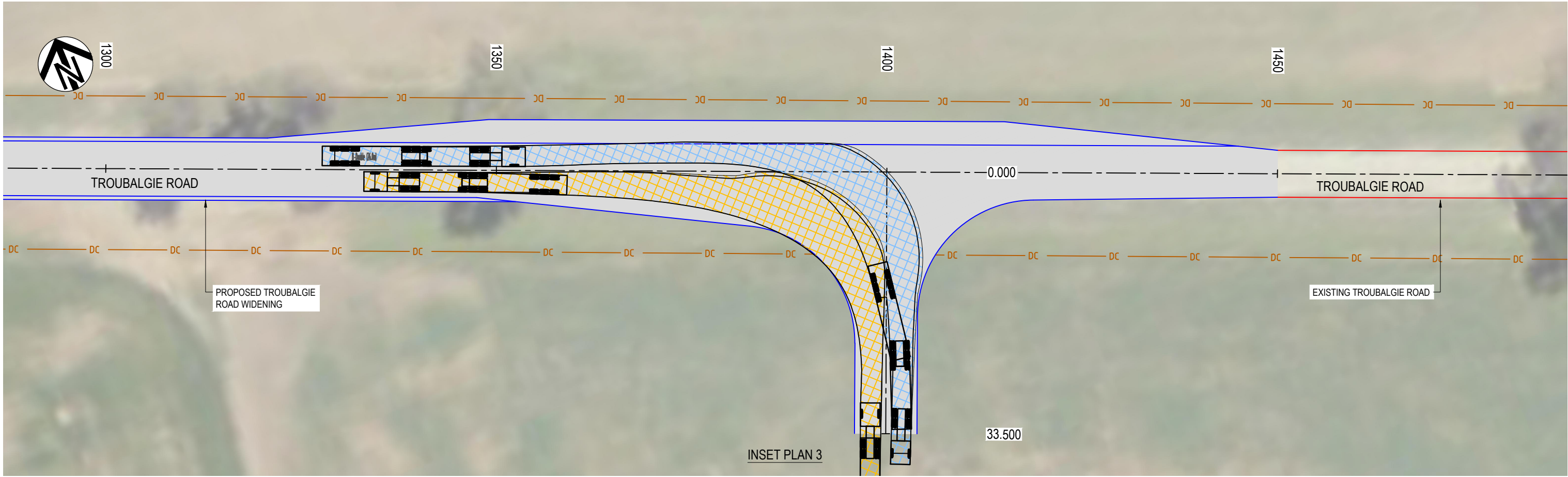


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**DAROOBALGIE SOLAR ROAD DESIGN  
INTERSECTION LAYOUT AND  
TURNPATHS - SHEET 1**

**INFORMATION DOCUMENT**  
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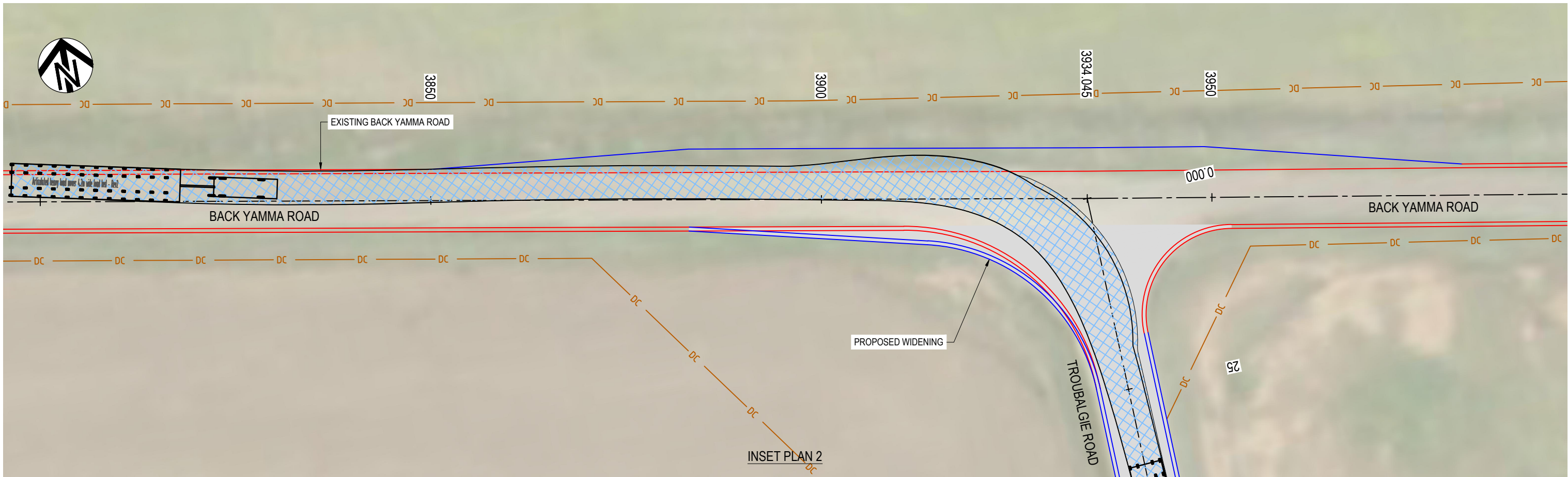
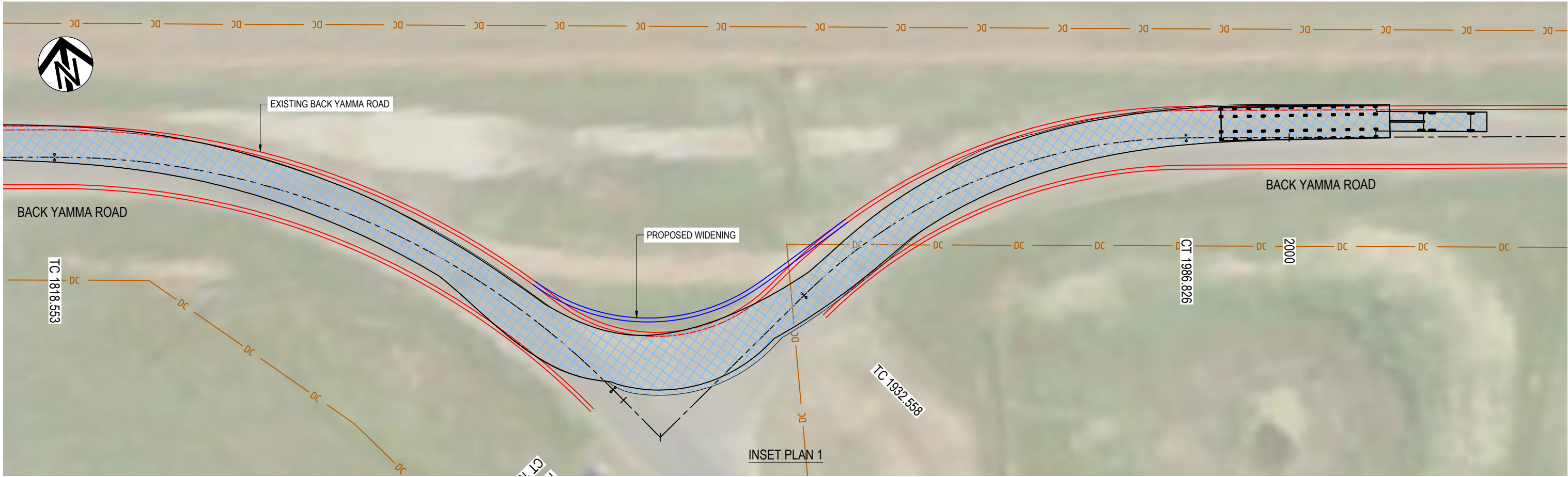
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**DAROOBALGIE SOLAR ROAD DESIGN  
INTERSECTION LAYOUT AND  
TURNPATHS - SHEET 2**

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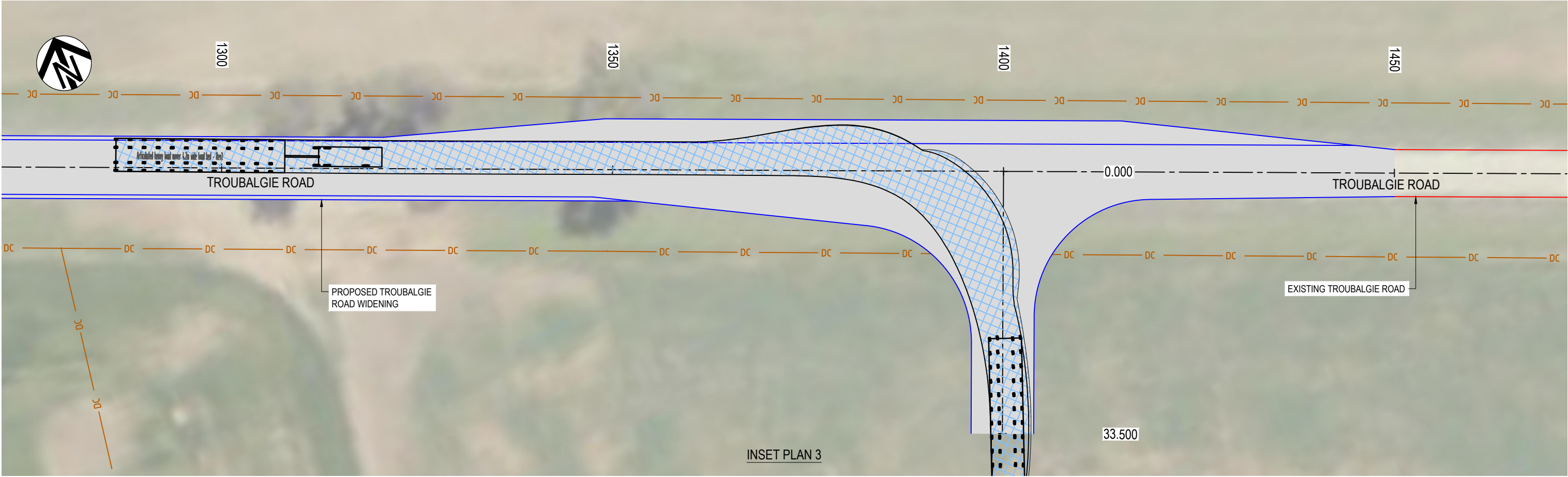
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**DAROOBALGIE SOLAR ROAD DESIGN  
INTERSECTION LAYOUT AND  
ALTERNATIVE TURNPATHS - SHEET 1**

**INFORMATION DOCUMENT  
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**DAROOBALGIE SOLAR ROAD DESIGN  
INTERSECTION LAYOUT AND  
ALTERNATIVE TURNPATHS - SHEET 2**

**INFORMATION DOCUMENT  
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