

CASE STUDY

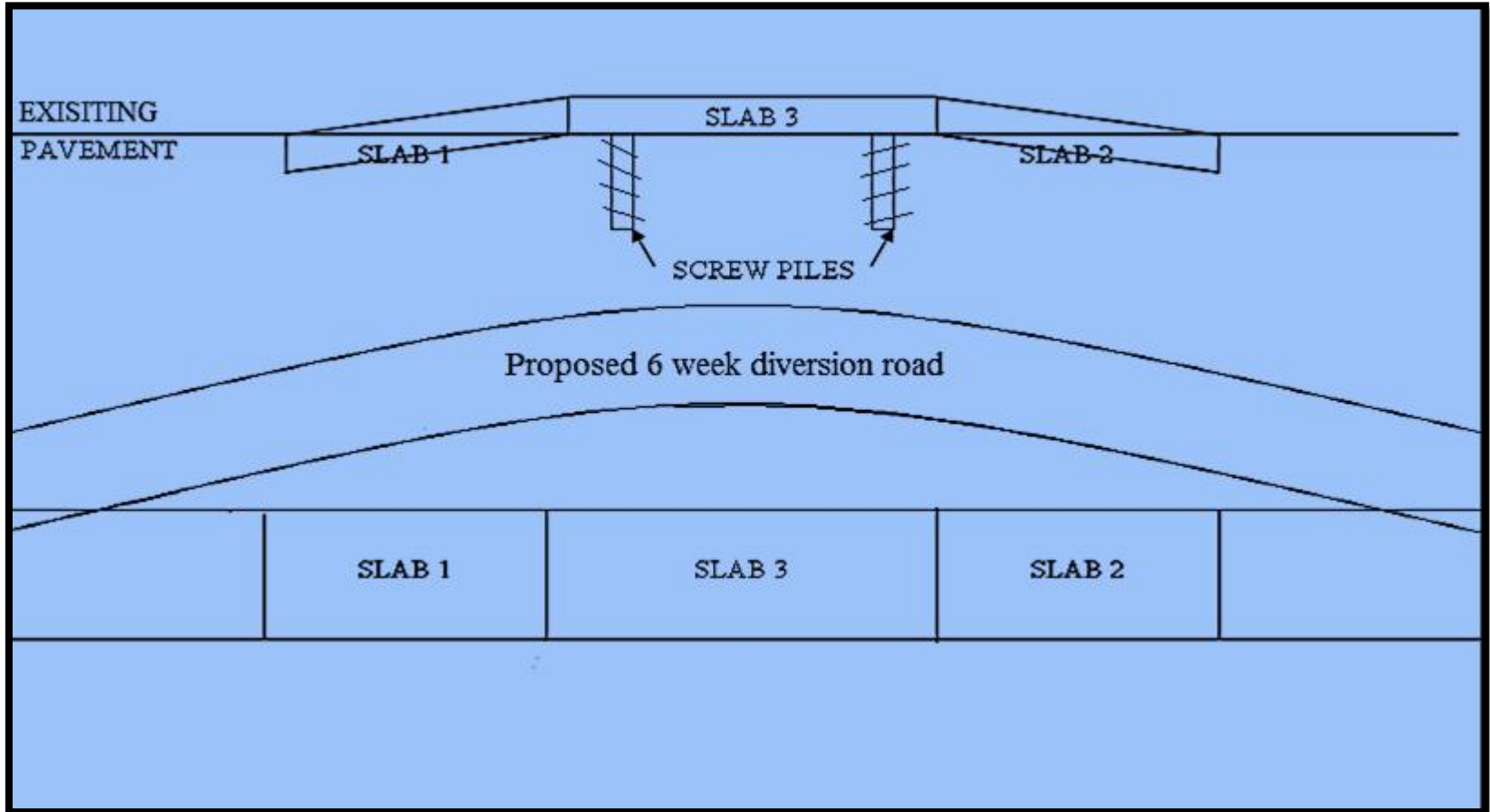
Savings Using Innovative Concrete Technology

Time Saving	Cost Saving
9 Weeks	\$265,592

SCOPE

- Existing section of road had to be modified to handle the load of 100 tonne dump trucks
- Ensure no damage to main water line under road
- Boolaroo Road is the main road into the town, therefore a major shutdown of the road was not an option!
- High profile project due to community concerns

OUTLINE



TRADITIONAL METHOD

Works	Estimated Time
➤ Construct temporary asphalt diversion road around the construction site	10 Weeks
➤ Traffic control during construction	
➤ Construct Concrete bridge on ground	
Cost To Carry Out Works	\$470,897

INNOVATIVE VCA METHOD

Works	Estimated Time
➤ Prepare subgrade for new bridge on ground works	5 hours
➤ Supply and place CTS Rapid Set Concrete – 38m ³ in 3 stages	6 hours
Concrete testing carried out between 1am and 4am Results achieved to open road at 6am as per program	

Cost To Carry Out Works	\$205,305
➤ Supply and place CTS Rapid Set Cement	\$123,877
➤ Civil Works - (site establishment / demobilization / assoc works – 5 days including RSC works over 1 night shift)	\$81,428

TEST RESULTS



Test Results

- ✓ 2 hours – 23.5MPa
- ✓ 6 hours – 26.0MPa
- ✓ 4 days – 50.0MPa
- ✓ **7 days – 56.0MPa**
- ✓ 28 days – 62.0MPa

Design strengths needed to achieve 32MPa in 7 days

**This Compressive Strength Was Achieved
Within 24 Hours**

DIRECT COMPARISON

	Traditional Method	VCA Method
Total Time	10 weeks	5 Nights
Total Cost	\$470, 897	\$205,305

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