

Project Manager to complete	Subject / Programme / Activity name:	Akerama Curves Realignment / Regionally Accelerated Prog
	Document title / Reference:	SH1 Akerama Improvements Price Level Increase
	SAP reference:	60202847
	Phase under review:	Implementation
	Current approved total phase cost:	s 9(2)(b)(ii)
	Revised total phase cost:	
	Implementation cost (as current state highway plan):	
	Proposed implementation cost:	
	Current BCR:	
	Revised BCR:	
	Project Manager name:	James Kaye
	Signature:	s 9(2)(a)
	Date:	Click here to enter a date. 7/6/17

What happened

This project is coming towards the end of construction. There have been a number of costs that weren't recognised in the phase estimate.

1. Iwi Monitoring s 9(2)(b)(ii) Iwi monitoring of the earthworks was a resource consent condition. This cost was not well understood at time of estimate and the costs have exceeded budget.
2. Southern Fill Springs s 9(2)(b)(ii) This cost is due to the discovery of three springs, at the southern fill zone, which required re-design of drainage and variation to the construction contract.
3. Batter slips s 9(2)(b)(ii) A number of slips occurred in the existing embankments within the site extents. This cost was to remediate the batter slopes, support weak insitu cut slopes, rock toe support, deep subsoil drains, and granular replacement.
4. Southern Fill Acceleration s 9(2)(b)(ii) The southern fill zone fell behind programme due to extreme weather events and difficult ground conditions. It is likely that the contractor would mount a successful claim for extensions of time with Costs associated with the weather and the re-use of the as dug clay material. It is highly desirable for the NZTA to open this Regionally Accelerated Project as soon as possible. This cost is to pay for accelerating the completion of the works in a staged manner whilst mitigating the geotechnical risks that remain on the project by substituting as dug material with imported granular fill.

Explain what happened to give rise to the request for additional funds, and why these events could not be mitigated. Complete table detailing additional expenses requested.

Additional tasks identified	Cost
1. Iwi Monitoring	s 9(2)(b)(ii)
2. Southern Fill Springs	
3. Batter slips	
4. Southern Fill Acceleration	

Contingency usage

This project had a contingency s 9(2)(b)(ii) which has been consumed on approved variations above. The

project will request to hold another s 9(2)(b)(ii) which is s 9(2)(b)(ii) is to include a contingency for items not yet known to the contract.

Has all contingency been consumed prior to this application? What contingency is allowed for, for the remaining phase activities?

Could it have been prevented

The following is the lessons learnt:

1. Iwi monitoring – Often resource consent conditions are not fully known at time of tender. Iwi monitoring is an unpredictable cost and can vary widely from project to project. This lesson was about ensuring all costs associated with resource consent requirements are included in the estimate as risk or contingency.
2. Southern Fill Springs – Increased geotechnical testing and investigations to identify weak subgrade and groundwater influence to the subgrade that would receive engineered fill. It is recognised that the outcome cost would be similar but would have been priced upfront.
3. Batter Slips – The slips were the result of ground water seepage and general instability of subsoils. These were unforeseen conditions and were not identified in the geotechnical investigations.
4. Southern Fill Acceleration – The lesson is to discuss and clearly allocate the earthworks risk in pre-tender meetings and highlight the importance of careful management of soil for cut to fill operations. Additional geotechnical investigations could have helped identify the potential for problems and a Baseline Report could be used to better define contractual risk. The extreme weather events certainly exacerbated this problem. Its highly likely that all of the additional costs would have been realised in one form or another.

Actions to mitigate further increases

1. All iwi monitoring has been completed.
2. All cut has been completed.
3. All cut has been completed.
4. Price has been agreed with the Contractor as a guaranteed maximum price. Using imported granular fill significantly reduces the risk to the programme.

What actions have been taken to ensure no further increases are likely on this project?

BCR impact

This price level increase asks for s 9(2)(b)(ii) to a total project cost of The BCR s 9(2)(b)(ii)

What effect does the increased cost to the project have on the BCR (including any follow on increases to the construction cost)?

Regional sign-off

Confirmation that the Project Delivery Manager, Transport Planning Manager or State Highway Manager has seen this request, and has approved it, proceeding to the SHPRC (or attach supporting email)

s 9(2)(a)

Name

Signature

Other unusual circumstances

State as required

Completed copy of this form (and any associated correspondence) is to be retained with the named documentation and returned to the Project Manager at the end of the process. This form is to be filed in the 'Assurance and approvals' file.